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POLLUTION OF OYSTER BEDS.

COURT DECIDES THAT LESSEE OF OYSTER BEDS IS NOT ENTITLED TO DAMAGES FROM A CITY BECAUSE OF POLLUTION BY SEWAGE.

A lessee of oyster beds sued the city of Hampton, Va., for damages caused by the pollution of the beds by the city sewage. He rented the beds from the State after the sewerage was established and with knowledge of the pollution.

The Supreme Court of Appeals of Virginia decided that the city had the right to empty its sewage into the tidal waters and that the plaintiff could not recover damages.

The court said:

The State guards the health of its people for the benefit and protection of the public at large, and under present sanitary standards sewerage systems for all thickly settled communities have become an imperative necessity, a public right, which is superior to the leasing by the State of a few acres of oyster land within the corporate limits of a city to an individual at \$1 per acre per annum. When the plaintiff leased this land, he took it with full knowledge of the then existing sewerage emptying into Hampton Creek and subject to the public right to increase the same as necessity required on account of the growth in population of the city of Hampton.

The opinion is printed in this issue of the Public Health Reports, page 2113.

POLIOMYELITIS (INFANTILE PARALYSIS).

INFORMATION FOR THE PUBLIC PUBLISHED BY THE NEW YORK CITY DEPARTMENT OF HEALTH.

From a circular issued by the Department of Health of the city of New York.

Infantile paralysis (poliomyelitis) is a catching disease. How it is spread is not yet definitely known. In most cases the disease is probably taken directly from a sick person, but it may be spread indirectly through a third person who has been taking care of the patient, or children who have been living in the same household.

The early symptoms are usually fever, weakness, fretfulness or irritability, and vomiting. There may or may not be acute pain at this time. Later, there is pain in the neck, back, arms or legs, with

great weakness. If paralysis is to occur, it usually appears from the second to the fifth day after the sickness begins. Many cases do not go on to paralysis.

The germ of the disease is present in discharges from the nose, throat, and bowels of those ill with infantile paralysis, even in the cases that do not go on to paralysis. It may also be present in the nose and throat of healthy children from the same family. Do not let your children play with children who have just been sick or who have or recently have had colds, summer complaint, etc. For this reason children from a family in which there is a case of infantile paralysis are forbidden to leave their home. If you hear of their doing so, report it at once to the department of health.

Persons over 16 years of age, from families where there are cases of poliomyelitis, may continue at work unless their business has to do with the preparation or handling of food or drink for sale.

If you hear of a case in your neighborhood and the house is not placarded, notify the department of health.

How to Guard Against the Disease.

In order to prevent the occurrence of this disease, parents should observe the following rules:

Keep your house or apartment absolutely clean.

Go over all woodwork daily with a damp cloth.

Sweep floors only after they have been sprinkled with sawdust, old tea leaves, or bits of newspaper which have been thoroughly dampened. Never allow dry sweeping.

Screen your windows against flies, and kill all flies in the house.

Do not allow garbage to accumulate, and keep pail closely covered.

Do not allow refuse of any kind to remain in your rooms.

Kill all forms of vermin, such as bedbugs, roaches, and body lice.

Pay special attention to bodily cleanliness. Give the children a bath every day and see that all clothing which comes into contact with the skin is clean.

Keep your children by themselves as much as possible. Do not allow them to visit moving picture shows or other places where children may gather.

Children should not be kept in the house; they should be outdoors as much as possible, but not in active contact with other children of the neighborhood. Do not take them on a street car, unless absolutely necessary, or shopping.

Do not allow your children to be kissed.

It is perfectly safe to let your children go to the parks and playgrounds if only two or three of them play together; they should not play in large groups, and you should not let them come into contact with children from other parts of the city.

Remember that children need fresh air in the summertime, and outdoor life is one of the best ways to avoid disease.

If there is a public shower bath in a school in your vicinity, send the older children there every day for a shower bath. This is perfectly safe and will help keep them in good health.

Give your children plain, wholesome food, including plenty of milk and vegetables.

Keep the milk clean, covered, and cold.

Do not allow the milk or any other food to be exposed where flies may alight upon it.

Wash well all food that is to be eaten raw.

In Case of Sickness.

Remember that during the hot weather children are apt to have stomach and bowel troubles. If your child is taken sick with loose movements of the bowels, or with vomiting, do not at once fear that it must be infantile paralysis; it may be simply digestive disturbance. Give the child a tablespoonful of castor oil and plenty of cool water to drink, and send for the doctor at once.

If you can not afford a doctor's services, telephone the department of health and one will be sent free of charge.

If a doctor or nurse from the department of health visits your home, give them all the information you can. They are sent to show you how to keep your children well.

Do not give your children patent medicines or buy charms of any kind to ward off the disease. The best preventive is cleanliness and strict observance of the rules that have been given.

Although there is no specific cure for the disease, much can be done to reduce the amount of crippling caused by the paralysis. It is important to remember that this requires the services of a trained physician and the care of a competent nurse. Unless you can give these to your child, send word at once to the department of health, so that the patient may receive proper care in a well-equipped hospital. Of the children cared for in hospitals, only one-fourth as many died as of those treated at home. Give your child a fair chance and let the hospital doctors care for it.

What the Health Department Will Do.

If a case of infantile paralysis occurs in your home, your doctor must at once notify the department of health. An inspector will be sent to investigate. He will paste a sign on the door of your apartment warning all people not to enter. This sign must not be removed except by some one sent by the department of health. The inspector and nurse will tell you just what to do to protect yourself and the others in the family.

CONTROL OF POLIOMYELITIS IN CONNECTICUT.**RECOMMENDATIONS OF THE STATE BOARD OF HEALTH TO LOCAL HEALTH OFFICERS.**

From a circular issued by the State Board of Health of Connecticut.

First. Upon the landing or arrival in a community of a child under the age of 16 years from New York, the name of said child with New York address and date of leaving New York should be secured, as well as the proposed residence in Connecticut.

Second. All children arriving from New York not having certificates of examination by New York physicians of recent date should be examined. This examination should be supplemented at frequent intervals for a period of 20 days from the date of leaving New York, or until such time as the health officer is satisfied that the child is probably not infected. Health officers are not under obligations to accept New York certificates.

Third. All children arriving in any town in the State not in condition of good health, or who later show signs of illness of any nature should be held under observation or quarantine until a positive diagnosis is determined.

Fourth. Health officers have the authority to quarantine all suspicious and positive cases and to incur the expense necessary to maintain such quarantine, and to make or have made such physical examinations as they deem necessary.

Fifth. Health officers may quarantine any one from *any* infected city or town whom they believe to be possibly infected whether ill or not.

Sixth. Positive cases should be reported by telephone to the State board of health at once, and should assistance be desired, it should be so stated.

Seventh. Physicians should be urged by the health officer to report all suspicious cases promptly, and the citizens of a community should be advised against panic, but should be urged to improve sanitary conditions and to follow such suggestions as the health officer may make from time to time.

Eighth. Where New York children are present in a community, the attendance by children at theaters, churches, and other public indoor gatherings should be discouraged. The exact mode of transmission of this disease has not as yet been determined, but it is known that the secretions from the nose and mouth of the afflicted contain the germs of the disease. It is therefore possible that transmission may be by dust, flies, fleas, household pets, common drinking cups and towels, family handkerchiefs, and by kissing among children. The public should be warned of these dangers.

SYPHILIS.**SOME OF ITS PUBLIC HEALTH ASPECTS.**

By L. L. WILLIAMS, Surgeon, United States Public Health Service.

The ravages of syphilis are so well known that it seems scarcely necessary to mention them. The more familiar phenomena of the disease, the initial lesion, the secondary stage with its multiform phases, and the grave lesions of tertiary syphilis are commonplaces of medicine, and it is unnecessary to accentuate their importance. Of late years the disabling and inveterate nervous lesions which used to be known as parasymphilitic diseases and which were regarded as terminal conditions are now, thanks to the brilliant original work in this field, known to be manifestations of active syphilitic infection, in no wise different in their intrinsic nature from other phenomena of this protean malady. Still more recently the scientific application of the Wassermann and similar tests has shown syphilis to be the probable causative factor in many cases of chronic degenerative diseases which heretofore have been regarded as belonging in another category. Thus, for instance, these tests have indicated the probable etiological relation of lues to certain cases of chronic nephritis and of organic heart lesions, especially those affecting the aortic orifice, and have pointed the way to rational therapeutic management. It is quite possible that the general routine use of these tests in all cases of arteriosclerosis might in many instances give a clew to the etiology as well as a hint as to one of the reasons for the apparent increase of this disease in modern times. It is also possible that the differentiation of the specific cases from those due to senile change might cause some revision of the grave prognosis usually pronounced in all cases of this type of vascular disease.

There is a general impression that syphilis is on the increase, although it is difficult to prove this by formal recorded evidence.

It is the despair of the medical statistician for reasons which are sufficiently obvious, the chief of these being the stigma attached to the disease and the obloquy which pursues the unfortunate who is known to suffer from it. Even in communities where notification, without mention of names, is required by the sanitary code, it is doubtful whether such a provision is generally observed by the medical profession. And in the matter of death certificates, the loose methods, ignorance and lack of exact diagnostic methods on the part of some practitioners and the complaisance of others will frequently result in the accumulation of misleading data. Many cases, for instance, in which the cause of death is given as apoplexy, softening of the brain, insanity, dementia, epilepsy, tabes, heart disease, kidney disease, liver disease, aneurysm, arteriosclerosis,

stillbirth, congenital debility, malnutrition, etc., should, if the truth were known, be entered as lues.

Upon this point a recent bulletin of the Department of Health, New York City, says:

The department of health has long since felt the need of more accurate statistics of the influence of alcohol on mortality and has realized that numerous deaths wherein alcohol, if not the primary cause, at least played an important rôle, have been recorded without reference being made to this important etiological factor. This, of course, is true also of deaths in which gonorrhoea or syphilis has played a part. We appreciate the numerous and weighty reasons that induce physicians, if not to hide, at least to withhold this information. On the other hand, we should be shirking our duty as health officers if we did not make serious attempts to secure this information in order that it may be made the scientific basis of a campaign against these grave menaces to public health.

A plea is then made for the communication of this information either on the death certificate, using technical terminology, or else in a sealed note accompanying the certificate.

There has been much speculation as to the probable causes of the presumed increase of syphilis in modern times. Among possible causes may be mentioned the increasing tendency to congestion of population in cities with the attendant extremes of wealth and poverty; and there is good reason for believing that such extremes would conduce to the acquirement of the disease though for very different reasons. Overcrowding in tenements, with other concomitants of poverty, is a potent cause on the one hand, while idleness and excess of money, without adequate ethical inhibitions, might prove equally provocative on the other.

Such considerations lend added force to the Psalmist's prayer to be delivered from both poverty and riches, and it is more than probable that the realization of the dream of the economist for a more equal distribution of wealth may be attended by sanitary advantages which he does not contemplate.

Another possible factor may be the latter-day tendency to the relaxation of dogmatic religious belief without the substitution of other effective ethical restraints.

Among the probable factors facilitating the spread of syphilis may be mentioned the increased facility of travel, in this respect following the rule as to the potency of this greater facility in promoting the dissemination of other communicable diseases. Indeed it is possible that this factor may be of more consequence than in other infections because of the length of the period of infectivity and the lack of disability for travel during this period, to say nothing of the strength of the basic instinct which is the prime element in the dissemination of this malady. All such considerations, however, are more or less speculative.

Whatever the causes, and whether or not on the increase, luetic infection presents the greatest of all the sanitary problems which confront the modern world.

Among the circumstances which render the problem of syphilis of such extreme gravity may be mentioned:

- (a) The difficulty in obtaining data of its incidence.
- (b) The stigma attaching to the disease rendering notification and prompt treatment difficult.
- (c) The extent to which it permeates all civilized communities and all strata of society.
- (d) Popular ignorance of the great gravity of the disease; few people know anything about the remote consequences.
- (e) Extreme chronicity and difficulty of permanent cure.
- (f) Frequency and gravity of late manifestations, especially lesions of nervous and cardio-vascular systems, affecting many otherwise valuable members of the community while at the height of their economic usefulness.
- (g) The large numbers of sufferers innocently infected in the marital relation and otherwise.
- (h) The effect in diminishing the birth rate.
- (i) The effects upon the progeny of syphilitic persons in case of survival after birth.
- (j) Probable late degeneracy among descendants of syphilitics.

Can any rational scheme of sanitary defense be evolved or must we be content with present inadequate methods of control and patiently wait until the entire race becomes syphilized perhaps and immunity gradually becomes established?

The older police methods of restriction and control of prostitution have not shown very encouraging results even in countries with a strong centralized government, and such procedures as licensure and periodic physical examinations have not been very effective except when limited to comparatively small groups under conditions of autocratic control, as in connection with military encampments. But, regardless of their efficacy or inefficacy, such methods would be practically impossible of adoption in a democracy such as ours, at least at the present time.

Before discussing possible methods of control the possibility of some automatic diminution in the spread of luetic infection due to modern therapeutics may be mentioned in passing. Irrespective of the ultimate radical cure of cases of syphilis, the effect of even one or two doses of the salvarsan group in promptly abolishing lesions of the mucous surface is well known. Such a phenomenon must inevitably lessen the chances of a patient submitted to such treatment infecting others, and as popular knowledge of the subject increases and early resort to treatment becomes more general, an

automatic decrease in the incidence of the disease may become apparent. This phase of the salvarsan treatment has perhaps not been sufficiently dwelt upon; whether or not such decrease will occur in the future can not be definitely known until reliable statistical data become available.

Among rational methods of control the education of the public comes first, and our success in opposing the onward march of this disease is likely to be in direct ratio to the degree in which we can dispel the clouds of ignorance, misconception, and false sentiment which now surround it, and bring the community to a realizing sense of its gravity and the necessity of facing the facts and adopting measures for dealing with them. At the outset we will be handicapped by the lack of reliable data. It is true that some communities now require notification (names being omitted), but the results thus far have not been very promising. And for this the medical profession is responsible, so that it would seem that a campaign of education should begin with the practicing physicians, and those who may be deficient in civic sense should be stimulated by the application of effective penalties.

One of the admirable methods of education, already adopted by some health organizations, is the instruction of the patient himself in connection with free treatment at dispensaries. Dispensaries with evening hours are said to be more popular. Such instruction is in line with that which has given good results in the case of the tuberculous and is at least a promising measure.

Another possible line of activity on the part of the health officer might be the institution of efforts to reach and instruct persons suspected to be syphilitic because of the existence of indirect evidence pointing in that direction. As an instance in point, the question of stillbirths may be mentioned. The reporting to the health officer of more than one stillborn child in the same family should excite the suspicion of the existence of syphilitic infection in the parents, who could then be instructed, either directly or through the family physician, and warned of the necessity of applying accurate diagnostic tests. It is needless to say that such activities should be safeguarded by strict privacy.

The education of the public through the press and from the platform has received more or less attention. The dissemination of literature carefully prepared and issued by authoritative medical or sanitary bodies and addresses by men to men and women to women are among the preferable methods. In either case much tact in the presentation of the topic and care in the avoidance of phases of the subject likely to arouse antagonism are essential. Organizations, either social or industrial, in which many men and women are brought together, offer a productive field for platform instruction of this

kind. That instruction of this sort should be given in the higher institutions of learning scarcely admits of doubt, and it is probable that it may be extended with propriety to the secondary schools; but greater care would be necessary in the latter case to avoid harmful results.

The case of the elementary schools is different and the propriety of giving instruction in the physiology and pathology of sex to young children is, to say the least, doubtful. A judicious and tactful parent or teacher may at times impart such information with benefit to a child of known temperament, but wholesale routine instruction by the average grammar-school teacher may be attended by unfortunate and unlooked for results. It would seem better in the case of young children to occupy their time and attention fully with work and play to the exclusion of the sex idea as much as possible, leaving special instruction upon this matter to a later and more appropriate period of their development.

The stage has recently been employed in the campaign of warning, and while the "horrible example" does not always have the effect desired, nevertheless it is very probable that much good follows the production of plays, such as those of Brieux, in which some of the terrible consequences of syphilis are portrayed with dramatic force. The popularity of such plays and the comment which they have occasioned are at least an index of the interest which the public takes in this subject when it is effectively presented. And, if people are to be taught at all, it must be in a way of their own choosing; they can be led but will not be driven.

The attempt at limitation of this and other venereal diseases in various countries through police regulation of prostitution, including physical examination at stated intervals and licensure, has been briefly referred to above. Apart from the difficulty of introducing this system in a country such as ours, it is the opinion of many unprejudiced and competent observers that this scheme is a failure, even in countries where it is backed up by autocratic power; and some of the reasons for such failure in the past are not far to seek. In the first place, the difficulty of diagnosis in the female subject, by physical examination alone, is often considerable. Then, owing to the repulsive nature of the work and a certain obloquy which would attend it, it would be difficult to secure competent men to carry out the law. Hasty and perfunctory examination would soon be the rule and the whole system in time would probably become permeated with graft.

The salient landmarks in the recent history of syphilis are the discovery of the treponema by Schaudinn, of salvarsan by Ehrlich, and of the blood test for syphilis by Wassermann. The first placed syphilis for all time clearly in the category of communicable diseases

caused by a living organism and established the etiology on a firm basis; the second gave a tremendous impulse to the therapeutics of the disease; the third supplied a scientific criterion of diagnosis and an invaluable guide in prognosis and treatment. The three together removed the disease from the realm of empiricism and conjecture, and opened the way to its eventual control. These discoveries, at first mainly of interest from the standpoint of the clinician and the pathologist, are probably destined in the long run to be regarded as among the most valued weapons of the sanitarian, with which he must hew a way to the conquest of this enemy of mankind. To know the nature of the disease, to be able to recognize it and to possess a remedy which, if not a specific, is, at least, of wonderful efficacy, are enormous gains.

The Wassermann reaction is, of course, not infallible; it may be negative when syphilis exists and, in rare instances, may be positive when syphilis is absent. Nevertheless, it will detect the disease in the vast majority of cases, and this constitutes its value to the public health officer. Hand in hand with diagnosis by this test goes treatment with the salvarsan group. Something has already been said of the value of these remedies in promptly removing the mucous lesions of syphilis and, as an inevitable consequence, in reducing the chances of a patient infecting others even though he may not himself be completely cured.

A certain automatic limitation of the disease is probably thus effected. It remains to be seen whether these same instrumentalities (the Wassermann test and salvarsan therapy), when deliberately employed by the sanitarian as public health measures, may not find a larger field for their application. Like all new methods, their use at first must be tentative and confined to a limited field. Their scope can be enlarged as experience may dictate and the state of public education may permit.

Some of the possible applications of this method may be mentioned:

1. *In the regulation of marriage.*—This is admittedly a very difficult question and most of the legislation inspired by eugenic theories has, unfortunately, been rather crude and difficult of execution. It would not seem to be an unreasonable requirement to enact that the contracting parties to a proposed marriage submit to a Wassermann test, the findings to be inspected only by the parties concerned. A positive finding would probably result in a postponement, at least, even in the absence of a statutory prohibition.

Whether a clause prohibiting marriage under such circumstances could wisely be included in any legislation on this subject is a question to be decided only after much deliberation. The propriety of such a prohibition can not be questioned, but the reaction of the community

at large to an enactment which curtails individual freedom of action in a matter so intimate can not be foreseen, and such legislation would be somewhat experimental, at best, until the education of the public should have progressed somewhat further than at present.

Apart from legislation, this phase of the subject may well be accentuated in any scheme of public instruction. It is one which without doubt will interest every parent of a marriageable girl once its importance is brought home. And surely any father may, with every assurance of the propriety of his action, demand of the suitor for his daughter's hand such evidence of physical soundness as a negative Wassermann test may afford.

If such a procedure should get a certain vogue, the time may come when public opinion would cause the voluntary offer of such evidence as a matter of course. To have anything become the fashion is better than to have it become the law.

2. *As a preliminary to life insurance.*—This is a field of great promise because of the enlightened attitude of the best companies toward the movement for health betterment and because of the financial interest involved in such a measure.

The list of grave chronic diseases in which the presence of syphilis as a factor has been demonstrated by the Wassermann test is steadily lengthening. An enlightened self-interest will probably lead to a general requirement that this test be applied. Or it may be utilized in a different way and a lower premium offered to policyholders who demonstrate a negative Wassermann.

Many of the degenerative lesions of middle life, which take such heavy toll of the very class which most commonly seeks life insurance, have been found in numerous instances by the application of modern diagnostic tests to be rooted in a previous syphilitic infection. Certainly the presence of latent syphilis as disclosed by the Wassermann test should give rise to grave apprehension of the possible future development of such terminal conditions as tabes, paralytic dementia, visceral or vascular degenerations, etc., and it is to be expected that progressive life insurance companies will eventually take note of these facts and institute the measures necessary for the protection of themselves and their policyholders.

In this connection and as an indication of the extent to which latent syphilis may exist among individuals whose condition gives no hint of its presence, reference is made to a recent significant article by Dr. Albert A. Hornor, of Boston, on "The Occurrence of the Wassermann Reaction among Hospital Patients."¹

Five hundred unselected medical cases admitted to the wards of the Boston City Hospital were submitted to the Wassermann test. In 87 cases, or more than 1 in 6, the test was positive. In 69 of these

¹ Boston Medical and Surgical Journal, Feb. 10, 1916.

cases, or in about 4 cases out of 5, there was no clinical evidence of syphilis. The following excerpt from Dr. Hornor's table shows the proportion of positive results in the cardiac and renal cases:

	Positive.	Negative.	Total.
Auricular fibrillation.....	2	0	2
Aortic disease.....	1	5	6
Aortic and mitral disease.....	1	5	6
Mitral diseases.....	5	51	56
Cardiorenal.....	5	5	10
Renal.....	4	21	25

3. *As preliminary to entrance into Government services.*—The Public Health Service, in its recent insistence that Wassermann tests be required of candidates for a commission, has given an example which deserves to be generally followed. Such a requirement would be especially useful in limiting the incidence of late cerebrospinal lues in the personnel of the national services and would be valuable as a silent object lesson to the public.

4. *As a general compulsory measure.*—This test, followed by treatment, could be utilized as a general compulsory measure in the military and naval forces. It is now applied, I understand, to all recruits. It could be applied in a similar manner in institutions subject to absolute discipline, such as penitentiaries and reformatories, and could be extended with advantage to persons convicted of certain minor offenses like vagrancy. The occasional rounding up of tramps for this purpose would be very salutary if followed by their detention for treatment.

The extent to which syphilis is spread by these wanderers is not known, but their habits and general characteristics are not reassuring. The belief, moreover, is gaining ground that many tramps are tramps because they are feeble-minded, or at least of unstable mentality. The tendency of such subnormal individuals to sexual irregularities is well known, and it is therefore probable that the incidence of venereal disease among them is above the average. In any case the community should receive the benefit of the doubt.

5. *As an optional measure.*—It may be applied as a strictly optional measure among various organized aggregations of men, such as higher academic and professional schools, training camps, factories, etc. Provision would have to be made, however, in such cases for strict secrecy.

6. *As preliminary to employment in certain large corporations.*—When instituted for such a purpose this diagnostic test would not only protect the corporation against financial loss, but would operate to safeguard the public against injury. The physical examination of employees of public-service corporations has been repeatedly advocated in the past for similar reasons. The application of the Wasser-

mann test is only an amplification of the same idea and would prove a safeguard against the kind of lesion most likely to result in accident. An apoplectic stroke due to syphilis of a brain artery, or a syncope resulting from syphilitic degeneration of the myocardium, is a painful event under any circumstances. When it happens to a pilot at the wheel, to a motorman negotiating a steep grade, or to an engineer of an express train, it may easily become a public calamity. If this measure is adopted at all, it will probably be adopted for the reasons named. A larger good would result in the detection and treatment of many cases of lues and the extension of the campaign for its suppression.

Most luetic subjects can be treated properly in dispensaries; many of them should be treated in hospitals, not only for their own sakes but for the better protection of the public. And not every city has made such provision. Many hospitals will not admit luetics; others which maintain such a service will often get rid of these patients as speedily as possible, the general tendency being to push them into the outpatient department. This tendency is proper enough if the question of economical hospital administration is alone to be considered; but from the public-health viewpoint—and this should dominate—it is advisable to treat in hospital all cases of primary syphilis as well as all other cases with open lesions.

It should be made easy, therefore, rather than difficult, for these patients to enter hospital, and they should be encouraged to remain until the disappearance of the more florid stages of the disease. Moreover, as the protection of the public rather than the cure of the individual patient is the principal aim, there should be ample provision for free treatment, whether in hospital or dispensary.

And most important measure of all is the thorough and sustained study of this disease from the standpoint of the public health, for upon such study future methods of practical control will depend. It is a field beset with difficulties; to cope with them may well enlist, and will surely tax, the best that may be procured of intellect and training.

Summary.

In the foregoing no attempt has been made to do more than tentatively discuss a few of the aspects of this great subject; and, in particular, any endeavor to outline an ideal and comprehensive scheme of control has been avoided.

The suggestions for partial control which have been advanced are those which now seem possible of adoption in practice. To insist upon ideal methods would probably result in failure; practical difficulties militating against the adoption of procedures which intrinsically may be of great value must be reckoned with and all measures

calculated to offend the sensibilities of the public avoided in so far as may be practicable. In other words, more progress will be made in the end by gaining the confidence and arousing the interest of the public, and thereby enlisting their cooperation, than by causing widespread antagonism in the prosecution of an ideally satisfactory campaign for suppression. In the case of the ordinary communicable diseases, like typhoid fever and tuberculosis, the problem is much simpler, yet progress is slow and well-established measures of control are tardily accepted.

In dealing with the problem of syphilis, on the other hand, we encounter not only ignorance but also a formidable array of erroneous fixed ideas and deeply rooted prejudices which can not be presently eradicated by the mere marshaling of scientific facts, no matter how cogently presented. Much tact, therefore, will be needed and much restraint must be exercised lest we seriously damage the cause we are advocating by urging radical reforms for which the public is not yet prepared.

PRESENT-DAY CONTROL OF DRUGS AND MEDICINES.

THE VARIATION IN PURITY AND STRENGTH OF WIDELY USED DRUGS AND PREPARATIONS A VEXATION TO THE PHYSICIAN AND A MENACE TO THE PATIENT.

By MARTIN I. WILBERT, Technical Assistant, Division of Pharmacology, Hygienic Laboratory, United States Public Health Service.

In connection with the several Hygienic Laboratory Bulletins containing a Digest of Comments on the Pharmacopœia of the United States of America and on the National Formulary, an attempt has been made to reflect the activities of Federal and State laboratories in so far as these activities relate to the enforcement of pure-drug laws, and also to review at some length the reports from other chemical laboratories in which pharmaceutical investigations are being made.

As has been pointed out before by the writer, the available reports from State and other laboratories show that the enforcement of State food and drug laws is far from being consistent and is certainly not persistent. The paucity of these reports also serves to emphasize the risk of placing too much reliance on what can be accomplished by State control alone without putting a proper amount of responsibility for the purity and strength of medicines where it rightfully belongs—on the pharmacist or druggist who sells or dispenses the medicine.

The limitations imposed by our present methods of enforcing the several laws designed to improve the nature and purity of products sold as medicine have been commented on at various times, and the available reports clearly indicate that the amount of work done is altogether inadequate to safeguard the consumer.

James H. Wallis, a former food and drug official, in commenting on the evident shortcomings of our present-day control of foods and drugs, recently expressed the belief¹ that the chief reasons why this work has not been more effective are the lack of cooperation between food and drug officials and insufficient educational work.

The need for systematic educational work is evidenced by the fact that any efficient control of drugs and medicines involves the expenditure of considerable sums of money. The necessary appropriations for work of this kind are not likely to be forthcoming unless the need for the work is recognized and practically indorsed by the people at large.

The following table showing the total number of drugs examined and rejected by five State laboratories serves to show the extent to which control work of this kind has been developed up to the present time. The five States enumerated in the table are undoubtedly the leaders in food and drug law enforcement and may well serve as models for others to conform to.

Table showing the total number of samples of drugs examined and rejected, reported from five State laboratories during 1914.

Author.	State.	Number of samples examined.	Number of samples rejected.	Per cent of samples rejected.
Barnard, H. E.....	Indiana.....	399	142	35.5
Newcomb, G. D.....	Iowa.....	116	35	30.2
Lythgoe, H. C.....	Massachusetts.....	1,393	204	14.6
Congdon, Leon A.....	Kansas.....	393	207	52.7
Todd, R. A.....	Michigan.....	571	214	37.5
Total.....		2,872	802	27.8

The information suggested in the above table is further emphasized by the following table compiled from reports quoted in Hygienic Laboratory Bulletin No. 105.²

The information presented in these compilations serves to suggest why medicines, when given for their physiologic effect, are frequently disappointing in that the expected results fail to manifest themselves, or the reverse; that moderate and even supposedly small doses of a preparation produce unexpected, and at times marked, secondary manifestations of drug intoxication.

¹ Pac. Pharm., 1914, v. 7, p. 283; also Drug. Circ., 1914, v. 58, p. 97.

² Digest of Comments on the Pharmacopœia of the United States of America and on the National Formulary for the calendar year ending December 31, 1914.

Table showing the number of samples of widely used drugs and preparations reported on by State and other chemists during 1914.

	Number of reporters.	Total number of samples.	Number of samples rejected.	Approx- imate per cent of rejected samples.
Ammonia water.....	4	76	46	62.1
Aspirin tablets.....	6	79	36	45.5
Bay rum.....	5	33	16	48.4
Diluted hydrochloric acid.....	4	155	98	63.2
Distilled extract of witch-hazel.....	5	72	13	18.0
Honey.....	6	108	9	8.3
Camphor liniment.....	8	234	99	41.4
Extract of lemon.....	5	222	69	30.5
Lard.....	8	215	95	44.2
Lime water.....	5	108	21	19.4
Oil of turpentine.....	8	234	25	10.7
Oil, linseed.....	8	123	60	48.7
Oil, olive.....	13	460	121	26.3
Solution of hydrogen peroxide.....	14	252	45	17.8
Solution of potassium arsenite.....	8	174	101	58.1
Spirit of camphor.....	16	906	314	34.6
Spirit of nitrous ether.....	14	400	245	61.2
Spirit of peppermint.....	15	476	264	55.4
Syrup of ferrous iodide.....	5	99	31	31.2
Tincture of aconite.....	3	138	73	52.1
Tincture of belladonna.....	6	172	133	77.3
Tincture of ferric chloride.....	8	193	101	52.3
Tincture of ginger.....	5	46	28	60.8
Tincture of iodine.....	14	1,042	475	45.5
Tincture of opium.....	7	141	31	21.9
Tincture of vanilla.....	6	188	46	24.4
Zinc ointment.....	4	18	8	44.4

Articles that during recent years have been frequently examined and reported on, like lime water, solution of hydrogen peroxide, and distilled extract of witch-hazel, appear to be of much better quality than in former years. Some few articles, like tincture of iodine, solution of potassium arsenite, and spirit of nitrous ether, despite the fact that they have been frequently reported on as being below standard, are even now found to be below standard and of poor quality. Comparatively important preparations, like tincture of aconite and tincture of belladonna, have also been found to be unreliable or not in accord with the official requirements.

This variation from the established standard is particularly significant in that it involves preparations that are more than ordinarily potent and which because of their potency may and not infrequently do produce untoward results.

The possibilities in this direction are perhaps best illustrated by the supposition that a physician may for some time have dispensed a preparation that was 20 or more per cent below standard and suddenly, without his knowledge, have substituted for this weak preparation a tincture that is 30 or more per cent above the established requirements. A variation of 50 per cent or more in the dose of so potent a preparation as tincture of aconite or tincture of belladonna, when the preparation is already being given to the limit of tolerance, might, and undoubtedly would, be followed by pronounced and possibly serious symptoms of drug intoxication.

The naturally occurring variation in the nature and composition of widely used vegetable drugs is well illustrated by the following table showing the variation in purity or value of a number of drugs reported on during the year 1914.

Table showing the variation in purity or value of a number of drugs reported on during the year 1914.

	Number of reporters.	Number of samples.	Variation in reported findings.
Aconite.....	6	41	0.24 to 0.884 per cent of alkaloidal principle.
Asafoetida.....	8	177	1.60 to 75.06 per cent of ash.
Belladonna leaves..	5	63	0.03 to 0.608 per cent of alkaloids of belladonna.
Hydrastis.....	5	39	1.96 to 4.21 per cent of hydrastine.
Hyoscyamus.....	5	49	0.004 to 0.11 per cent of mydriatic alkaloids.
Ipecac.....	7	82	0.823 to 2.56 per cent of alkaloids.
Jalap.....	6	54	3.30 to 14 per cent of resin.
Lupulin.....	5	42	2.4 to 49.07 per cent of ash.

The available data regarding the fluctuations in the purity, nature and composition of widely used drugs suggest at least that much of the supposed variability in the action of drugs on the animal organism can be accounted for in this way rather than by the assumption of idiosyncrasy or special susceptibility on the part of patients themselves.

That the problems involved in any form of adequate control of the medicine supply business are far from solved in an effectual way by the furnishing of a guarantee by the wholesale dealer or the manufacturers is evidenced by the generally accepted statement that once a seal is broken, a package opened, or a cork drawn the wholesale dealer or the manufacturer can no longer be held responsible for the contents of the package and the pharmacist or dispenser must assume all responsibility for the nature and purity of the article.

The possibilities of deterioration due to any one of a number of possible factors or combination of factors are now generally recognized. As yet little or no concerted effort has been made to improve on existing conditions, largely because the underlying causes are of such a far-reaching nature as to require radical changes in our present-day methods of supplying drugs to the consumer.

The chemist for the Massachusetts State board of health is quoted as saying that it has been shown that the larger amount of adulteration and substitution is practiced by the small dealer. While the word "adulteration" may not properly represent the conditions as found it is in a general way, undoubtedly, true that materials purchased in a small way from retail dealers are more frequently below standard than are the same drugs or preparations purchased from a wholesale dealer or direct from the manufacturer.

A chemist for one of the larger chemical manufacturing houses repeatedly pointed out that one of the greatest laxities in the handling of drugs lies in the use of poor containers, and investigations that have been made under the auspices of State food and drug chemists have shown without a doubt that pharmacists are not only careless in the method of storing perishable drugs and preparations but that the weights and measures found in their stores are frequently far from standard. This combination, poor container, imperfect storage, and nonstandard weights and measures is quite sufficient to explain the reason why on analyses, preparations purchased from retail druggists are frequently found to be far from standard and appear to indicate gross carelessness or crass ignorance in their making.

Theoretically a drug store should be a place where nothing is obtainable but drugs of standard quality and where all activities and energies, all the thoughts of the owners and employees are devoted to this one object.

In the average drug store, with its many and varied so-called side lines, little or no attention can be given to the systematic control of even the more frequently used drugs and preparations, and practically no supervision is exercised over the less frequently used drugs or preparations which are seldom called for. The systematic inspection of drug stores in this country is as yet not at all developed, though a beginning has been made in at least several States. The food and drug commissioner of Georgia in commenting on existing conditions asserts that the drug inspectors and commissioners are powerless to carry on their work unless supported by druggists themselves. The officials are willing enough to make drug-inspection work as real and efficient as is indicated by the support given by retail druggists or the people at large.

In conclusion it may be said that the laws designed to regulate the practice of pharmacy and to restrict the distribution of potent drugs to specially trained and capable individuals are ineffective and sadly out of keeping with the present-day needs. These laws were enacted 20 or more years ago to comply with the average requirements then evidenced and have done much to hamper the general progress of pharmacy in a way that would make pharmacy be of service to the people or a safeguard to the public health.

Efficient and active control of drugs and their preparations can be exercised only by the dispenser or distributor of medicines to the consumer. The activities of the State officials should be developed to provide for the systematic inspection of drug stores or dispensaries, thus insuring a more comprehensive and systematic control of all of the drugs and preparations on hand. A more intensive and more comprehensive enforcement of existing laws would tend to bring about the necessary changes in the drug and medicine business, and thus make of it what it should be, a guardian of the public health.

PLAGUE-PREVENTION WORK.**CALIFORNIA.**

The following reports of plague-prevention work in California were received from Senior Surg. Pierce, of the United States Public Health Service, in charge of the work:

WEEK ENDED JULY 8, 1916.

FEDERAL AND COUNTY INSPECTION SERVICE.

(For enforcement of the law of June 7, 1913.)

Counties.	In-spec-tions.	Rein-spec-tions.	Acres in-spected.	Acres rein-spected.	Acres treated.			Holes treated.
					Pumps.	Waste balls.	Grain.	
Alameda.....		65		18,216		50	920	
Contra Costa.....		19	7,521				100	
Stanislaus.....	35	18	2,531	4,123		20	790	130
Monterey.....	23		27,966				2,550	
San Benito.....	44		29,766				2,190	800
Santa Cruz.....		18		4,947				
Santa Clara.....	33	2	11,864	3,075	4		939	60
Total.....	135	122	79,648	30,361	4	70	7,503	990

SQUIRRELS COLLECTED AND EXAMINED.

Counties.	Collected.	Examined.	Infected.
Merced.....	307	290	None.
Kern.....	46	28	None.
Mendocino.....	145	145	None.
Madera.....	14	14	None.
Stanislaus.....	40	40	None.
Contra Costa.....	14		5
Alameda.....			2
San Benito.....			5
San Mateo.....			1
Total.....	566	517	13

OTHER ANIMALS COLLECTED AND EXAMINED.

	Rats.
Oakland.....	23
Richmond.....	10
Merced.....	1
Total.....	34

RANCHES INSPECTED AND HUNTED OVER.

Madera County.....	3
Kern County.....	6
Mendocino County.....	6
Stanislaus County.....	14
Merced County.....	27
Contra Costa County.....	1
Total.....	57

PLAGUE-INFECTED SQUIRRELS.**San Mateo County:**

Shot June 21, 1916. H. I. Selby ranch, 2 miles west of Menlo Park, T. 5 S., R. 3 W. 1

Alameda County:

Shot June 21, 1916. M. J. Crocker ranch, 6 miles northwest of Altamont, W. ½ sec. 1, T. 2 S., R. 3 E. 1

PLAGUE INFECTED SQUIRRELS—continued.**Alameda County—Continued.**

Shot June 23, 1916. H. A. Peterson ranch, 6 miles northeast of Altamont, sec. 6, T. 2 S., R. 4 E. 1

Contra Costa County:

Shot June 26, 1916. Abrams Bros. ranch, 9 miles southwest of Antioch, sec. 8, T. 1 N., R. 1 E. 1

Shot June 27, 1916. Southport L. & C. Co., property, 9 miles southwest of Antioch, sec. 8, T. 1 N., R. 1 E. 2

Shot June 28, 1916. J. Harding ranch, 7½ miles southwest of Antioch, sec. 15, T. 1 N., R. 1 E. 2

San Benito County:

Shot June 26, 1916. S. Garcia ranch, 6 miles west of Paicines, sec. 13, T. 14 S., R. 5 E. 1

Shot June 27, 1916. N. Hinshaw ranch, 4 miles northeast of Paicines, secs. 4 and 5, T. 14 S., R. 7 E. 1

Shot June 30, 1916. N. Hinshaw ranch, 4 miles northeast of Paicines, secs. 4 and 5, T. 14 S., R. 7 E. 2

The following is a record of municipal work performed under the supervision of the United States Public Health Service:

Premises inspected.....	591	WORK DONE ON OLD BUILDINGS—continued.	
Nuisances abated.....	123	Total area concrete laid (sq. ft.).....	24,035
Rats trapped.....	66	Floors rat proofed with wire cloth (sq. ft., 15)	1
Rats sent to laboratory.....	66	Buildings razed.....	14
Rats examined.....	56	OPERATIONS ON THE WATER FRONT.	
Poisons placed.....	33,600	Vessels inspected for rat guards.....	8
Garbage cans stamped approved.....	378	New rat guards procured.....	1
Identified:		Defective rat guards repaired.....	1
<i>Mus norvegicus</i>	21	Rats trapped on wharves and water front...	44
<i>Mus alexandrinus</i>	24	Rats trapped on vessels.....	22
<i>Mus musculus</i>	None.	Traps set on wharves and water front....	140
<i>Mus rattus</i>	21	Traps set on vessels.....	133
WORK DONE ON OLD BUILDINGS.		Vessels trapped on.....	19
Wooden floors removed.....	32	Poisons placed on water front (pieces).....	3,600
Yards and passageways, planking removed.	6	Bait used on water front and vessels—bacon	
Cubic feet new foundation walls installed..	2,370	(pounds).....	6
Concrete floors installed (sq. ft., 6,940).....	5	Bread used in poisoning water front (loaves)	12
Basements concreted (sq. ft., 13,255).....	29	Pounds of poison used on water front.....	4
Yards and passageways, etc., concreted		Poisons placed within Panama-Pacific In-	
(sq. ft., 4,740).....	26	ternational Exposition grounds (pieces)..	30,060

WEEK ENDED JULY 15, 1916.

FEDERAL AND COUNTY INSPECTION SERVICE.

(For enforcement of the law of June 7, 1913.)

Counties.	Inspec- tions.	Rein- spec- tions.	Acres in- spected.	Acres re- inspected.	Acres treated.			Holes treated.
					Pumps.	Waste balls.	Grain.	
Alameda.....		80		24,279		110	1,708	44,408
Contra Costa.....		63		23,931		48	625	
Stanislaus.....	90	1	22,836	440		200	615	
Monterey.....	53		38,236				400	
San Benito.....	67	4	52,204	1,795			3,383	
Santa Cruz.....		40		15,400			860	
Santa Clara.....	25	3	10,428	722		78	990	300
Total.....	235	191	123,704	66,567		436	8,581	44,708

SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE.

Counties.	Collected.	Examined.	Found infected.
Merced.....	207	200	None.
Kern.....	89	89	None.
Madera.....	43	43	None.
San Benito.....			1
Total.....	339	332	1

OTHER ANIMALS COLLECTED AND EXAMINED.

	Rats.
Oakland.....	23
Richmond.....	10
Merced.....	1
Total.....	34

RANCHES INSPECTED AND HUNTED OVER.

Madera County.....	3
Kern County.....	6
Mendocino County.....	6
Stanislaus County.....	14
Merced County.....	27
Contra Costa County.....	1
Total.....	57

PLAGUE-INFECTED SQUIRRELS.

San Mateo County:	
Shot June 21, 1916. H. I. Selby ranch, 2 miles west of Menlo Park, T. 5 S., R. 3 W.	1
Alameda County:	
Shot June 21, 1916. M. J. Crocker ranch, 6 miles northwest of Altamont, W. $\frac{1}{2}$ sec. 1, T. 2 S., R. 3 E.	1

PLAGUE-INFECTED SQUIRRELS—continued.

Alameda County—Continued.	
Shot June 23, 1916. H. A. Peterson ranch, 6 miles northeast of Altamont, sec. 6, T. 2 S., R. 4 E.	1
Contra Costa County:	
Shot June 26, 1916. Abrams Bros. ranch, 9 miles southwest of Antioch, sec. 8, T. 1 N., R. 1 E.	1
Shot June 27, 1916. Southport L. & C. Co. property, 9 miles southwest of Antioch, sec. 8, T. 1 N., R. 1 E.	2
Shot June 28, 1916. J. Harding ranch, 7 $\frac{1}{2}$ miles southwest of Antioch, sec. 15, T. 1 N., R. 1 E.	2
San Benito County:	
Shot June 26, 1916. S. Garcia ranch, 6 miles west of Paicines, sec. 13, T. 14 S., R. 3 E.	1
Shot June 27, 1916. N. Hinshaw ranch, 4 miles northeast of Paicines, secs. 4 and 5, T. 14 S., R. 7 E.	1
Shot June 30, 1916. N. Hinshaw ranch, 4 miles northeast of Paicines, secs. 4 and 5, T. 14 S., R. 7 E.	3

RECORD OF PLAGUE INFECTION.

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number rodents found infected since May, 1907.
Cities:				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	None.	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	None.	126 rats.
Berkeley.....	Aug. 28, 1907	None.	None.	None.
Los Angeles.....	Aug. 11, 1908	None.	Aug. 21, 1908	1 squirrel.
Counties:				
Alameda (exclusive of Oakland and Berkeley).	Sept. 24, 1909	Oct. 17, 1909, wood rat.	June 23, 1916	293 squirrels, 1 wood rat.
Contra Costa.....	July 13, 1915	None.	June 28, 1916	1,629 squirrels.
Fresno.....	None.	None.	Oct. 27, 1911	1 squirrel.
Merced.....	None.	None.	May 12, 1916	7 squirrels.
Monterey.....	None.	None.	May 27, 1916	38 squirrels.
San Benito.....	June 4, 1913	None.	June 30, 1916	71 squirrels.
San Joaquin.....	Sept. 18, 1911	None.	Aug. 26, 1911	18 squirrels.
Santa Clara.....	Aug. 31, 1910	None.	June 21, 1916	32 squirrels.
San Luis Obispo.....	None.	None.	Jan. 29, 1910	1 squirrel.
Santa Cruz.....	None.	None.	May 30, 1916	5 squirrels.
Stanislaus.....	None.	None.	June 2, 1911	18 squirrels.
San Mateo.....	None.	None.	June 21, 1916	1 squirrel.

The work is being carried on in the following named counties: Alameda, Contra Costa, Stanislaus, San Benito, Santa Cruz, Kern, Monterey, Merced, Santa Clara, and Madera.

The following is a record of municipal work performed under the supervision of the United States Public Health Service:

OPERATIONS ON THE WATER FRONT.

Vessels inspected for rat guards.....	14
Reinspections made on vessels.....	2
New rat guards procured.....	2
Defective rat guards repaired.....	1
Rats trapped on wharves and water front.....	43
Rats trapped on vessels.....	30
Traps set on wharves and water front.....	147
Traps set on vessels.....	112
Vessels trapped on.....	18
Poisons placed on water front (pieces).....	3,600

OPERATIONS ON THE WATER FRONT—continued.

Bait used on water front and vessels.	
Bacon (lbs.).....	6
Bread used in poisoning water front (loaves).....	12
Pounds of poison used on water front.....	4
Poisons placed within the Panama-Pacific International Exposition grounds.....	36,000

COOPERATIVE MUNICIPAL WORK.

Premises inspected.....	704
Nuisances abated.....	121

COOPERATIVE MUNICIPAL WORK—continued.

Rats trapped.....	73
Rats sent to laboratory.....	73
Rats examined.....	57
Poisons placed.....	42,600
Garbage cans stamped approved.....	625
Identified:	
<i>Mus norvegicus</i>	23
<i>Mus rattus</i>	31
<i>Mus alexandrinus</i>	19
<i>Mus musculus</i>	None.

WORK DONE ON OLD BUILDINGS.

Wooden floors removed.....	21
Yards and passageways, planking removed.....	1
Cubic feet new foundation walls installed.....	1,875
Concrete floors installed (sq. ft., 10,325)....	14
Basements concreted (sq. ft., 10,810).....	18
Yards and passageways, etc., concreted (sq. ft., 4,645).....	18
Total area concrete laid (sq. ft., 25,780)....	.....
Floors rat proofed with wire cloth (sq. ft., 2,140).....	4
Buildings razed.....	17

LOUISIANA—NEW ORLEANS—PLAGUE ERADICATION.

The following reports of plague-eradication work at New Orleans were received from Passed Asst. Surg. Simpson, of the United States Public Health Service, in charge of the work:

WEEK ENDED JULY 15, 1916.

OUTGOING QUARANTINE.

Vessels fumigated with cyanide gas.....	13
Pounds of cyanide used in cyanide-gas fumigation.....	787
Pints of sulphuric acid used in cyanide-gas fumigation.....	1,177
Clean bills of health issued.....	37
Foul bills of health issued.....	2

FIELD OPERATIONS.

Rodents trapped.....	6,657
Premises inspected.....	6,324
Notices served.....	359
Garbage cans installed.....	39

BUILDINGS RAT PROOFED.

By elevation.....	161
By marginal concrete wall.....	120
By concrete floor and wall.....	154
By minor repairs.....	231

Total buildings rat proofed.....	666
Square yards of concrete laid.....	3,486
Premises, planking and shed flooring removed.....	81

BUILDINGS RAT PROOFED—continued.

Buildings demolished.....	154
Total buildings rat proofed to date (abated) 120,427	

LABORATORY OPERATIONS.

Rodents received, by species:

<i>Mus rattus</i>	146
<i>Mus norvegicus</i>	1,018
<i>Mus alexandrinus</i>	166
<i>Mus musculus</i>	5,400
Wood rats.....	34
Muskrats.....	8
Putrid (included in enumeration of species).....	158
Total rodents received at laboratory.....	6,772
Rodents examined.....	1,391
Rats suspected of plague.....	139
Plague rats confirmed.....	1

PLAGUE RAT.

Case No. 313:

Address, 2639 Dumaine Street.

Captured, June 13, 1916.

Diagnosis confirmed, July 10, 1916.

Treatment of premises: Removal of rubbish and debris; intensive trapping.

WEEK ENDED JULY 22, 1916.

OUTGOING QUARANTINE.

Vessels fumigated with cyanide gas.....	7
Cyanide used in cyanide-gas fumigation pounds.....	364
Sulphuric acid used in cyanide-gas fumigation (pints).....	545
Clean bills of health issued.....	27
Foul bills of health issued.....	4

FIELD OPERATIONS.

Rodents trapped.....	6,666
Premises inspected.....	6,129
Notices served.....	486
Garbage cans installed.....	30

BUILDINGS RAT PROOFED.

By elevation.....	103
By marginal concrete wall.....	97
By concrete floor and wall.....	149
By minor repairs.....	180

Total buildings rat proofed.....	529
Concrete laid (square yards).....	6,865
Premises, planking and shed flooring removed.....	96
Buildings demolished.....	89
Total buildings rat proofed to date (abated) 120,956	

¹ Indicates the number of rodents the tissues of which were inoculated into guinea pigs. Most of them showed on necropsy only evidence of recent inflammatory process; practically none presented gross lesions characteristic of plague infection.

LABORATORY OPERATIONS.

Rodents received by species:	
<i>Mus rattus</i>	185
<i>Mus norvegicus</i>	1,072
<i>Mus alexandrinus</i>	158
<i>Mus musculus</i>	5,080
Wood rats.....	30
Musk rats.....	8
Putrid (included in enumeration of species).....	118
Total rodents received at laboratory.....	6,533
Rodents examined.....	1,475
Rats suspected of plague.....	142
Plague rats confirmed.....	2

PLAGUE RATS.

Case No. 314:	
Address, 515 Magazine Street.	
Captured, June 16, 1916.	
Diagnosis confirmed, July 22, 1916.	
Treatment of premises: Fumigation with cyanide. Intensive trapping; repair of defects.	

PLAGUE RATS—continued.

Case No. 315:	
Address, Fabacher's dairy, Gretna, La.	
Captured July 7, 1916.	
Diagnosis confirmed, July 22, 1916.	
Treatment of premises: Intensive trapping.	
PLAGUE STATUS TO JULY 22, 1916.	
Last case of human plague, Sept. 8, 1915.	
Last case of rodent plague, July 7, 1916.	
Total number of rodents captured to July 22.....	780,461
Total number of rodents examined to July 22.....	370,632
Total cases of rodent plague to July 22, by species:	
<i>Mus musculus</i>	6
<i>Mus rattus</i>	19
<i>Mus alexandrinus</i>	16
<i>Mus norvegicus</i>	274
Total rodent cases to July 22, 1916...	315

WASHINGTON—SEATTLE—PLAGUE ERADICATION.

The following report of plague-eradication work at Seattle for the week ended July 15, 1916, was received from Surg. Boggess, of the United States Public Health Service, in charge of the work:

RAT PROOFING.

New buildings inspected.....	14
New buildings reinspected.....	23
Basements concreted, new buildings (square feet, 17,280).....	15
Floors concreted, new buildings (square feet, 25,770).....	22
Yards, etc., concreted, new buildings (square feet, 3,275).....	5
Sidewalks concreted (square feet, 6,240).	
Total concrete laid, new structures (square feet, 52,565).	
New buildings elevated.....	3
New premises rat proofed, concrete.....	37
Old buildings inspected.....	5
Premises rat proofed, concrete, old buildings.....	3
Floors concreted, old buildings (square feet, 4,760).....	3
Premises otherwise rat proofed, old buildings.....	2
Openings screened, old buildings.....	13
Rat holes cemented, old buildings.....	34
Wooden floors removed, old buildings.....	3
Wire screening used (square feet, 650).	
Buildings razed.....	4

LABORATORY AND RODENT OPERATIONS.

Dead rodents received.....	5
Rodents trapped and killed.....	135
Rodents recovered after fumigation.....	34
Total.....	174

LABORATORY AND RODENT OPERATIONS—contd.

Rodents examined for plague infection.....	99
Rodents proven plague infected.....	None.
Poison distributed, pounds.....	11
Bodies examined for plague infection.....	1
Bodies found plague infected.....	None.

CLASSIFICATION OF RODENTS.

<i>Mus rattus</i>	17
<i>Mus alexandrinus</i>	42
<i>Mus norvegicus</i>	83
<i>Mus musculus</i>	32

WATER FRONT.

Vessels inspected and histories recorded.....	12
Vessels fumigated.....	3
Sulphur used, pounds.....	2,750
New rat guards installed.....	11
Defective rat guards repaired.....	15
Fumigation certificates issued.....	3
Canal Zone certificates issued.....	2
Port sanitary statements issued.....	39
The usual day and night patrol was maintained to enforce rat guarding and fending.	

MISCELLANEOUS WORK.

Rat-proofing notices sent to contractors, new buildings.....	8
Letters sent in re rat complaints.....	3
Health lectures.....	1

¹ Indicates the number of rodents, the tissues of which were inoculated into guinea pigs. Most of them showed on necropsy only evidence of recent inflammatory process; practically none presented gross lesions characteristic of plague infection.

RODENTS EXAMINED IN EVERETT.

Mus norvegicus trapped.....	54
Mus musculus trapped.....	2
Total.....	56
Rodents examined for plague infection.....	53
Rodents proven plague infected.....	None
RAT-PROOFING OPERATIONS IN EVERETT.	
New buildings inspected.....	3
New buildings reinspected.....	3

RAT PROOFING OPERATIONS IN EVERETT—contd.

New buildings, concrete foundations.....	1
New buildings elevated.....	2

RODENTS EXAMINED IN TACOMA.

Mus norvegicus trapped.....	66
Rodents examined for plague infection.....	66
Rodents proven plague infected.....	None.

HAWAII—HILO—PLAGUE PREVENTION.

The following reports of plague-prevention work at Hilo were received from Surg. Trotter, of the United States Public Health Service:

WEEK ENDED JUNE 24, 1916.

Rats and mongoose taken.....	2,149	Classification of rats trapped and found dead:	
Rats trapped.....	2,123	Mus norvegicus.....	646
Mongoose taken.....	26	Mus alexandrinus.....	235
Rats and mongoose examined macroscopically.....	2,149	Mus rattus.....	437
Rats and mongoose examined microscopically.....	1	Mus musculus.....	805
Rats and mongoose plague infected.....	None.		

WEEK ENDED JULY 1, 1916.

Rats and mongoose taken.....	2,320	Classification of rats trapped and found dead:	
Rats trapped.....	2,280	Mus norvegicus.....	782
Mongoose taken.....	40	Mus alexandrinus.....	294
Rats and mongoose examined macroscopically.....	2,320	Mus rattus.....	393
Rats and mongoose plague infected.....	None	Mus musculus.....	811

WEEK ENDED JULY 8, 1916.

Rats and mongoose taken.....	1,806	Classification of rats trapped and found dead—Continued.	
Rats trapped.....	1,780	Mus rattus.....	288
Rats found dead.....	5	Mus musculus.....	581
Mongoose taken.....	21	Last case of rat plague, Paauhau Sugar Co., Jan. 18, 1916.	
Rats and mongoose examined macroscopically.....	1,806	Last case of human plague, Paauhau sugar Co., Dec. 16, 1915.	
Rats and mongoose plague infected.....	None		
Classification of rats trapped and found dead:			
Mus norvegicus.....	640		
Mus alexandrinus.....	276		

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

ANTHRAX.

California Report for June, 1916.

During the month of June, 1916, there were two cases of anthrax reported in California.

CEREBROSPINAL MENINGITIS.

State Reports for June, 1916.

Place.	New cases reported.	Place.	New cases reported.
California:		Virginia:	
San Mateo County—		Alleghany County.....	1
Daly.....	1	Augusta County.....	1
Siskiyou County—		Campbell County.....	1
Fort Jones.....	1	Clarke County.....	1
Total.....	2	Cumberland County.....	2
		Dickenson County.....	1
Indiana:		Elizabeth City County.....	1
Kosciusko County.....	1	Floyd County.....	1
		Fluvanna County.....	1
Kansas:		Halifax County.....	1
Butler County.....	2	Henrico County.....	2
Osage County.....	1	Lee County.....	3
Pratt County.....	1	Lunenburg County.....	1
Sumner County.....	1	Montgomery County.....	2
Total.....	5	Norfolk County.....	1
		Orange County.....	2
Mississippi:		Page County.....	1
Coahoma County.....	1	Pittsylvania County.....	2
Lawrence County.....	1	Prince Edward County.....	1
Total.....	2	Rockbridge County.....	1
		Rockingham County.....	1
Ohio:		Southampton County.....	1
Athens County—		Tazewell County.....	2
Nelsonville.....	1	Total.....	31
Cuyahoga County—			
Cleveland.....	6	Washington:	
Hamilton County—		Franklin County.....	1
Cincinnati.....	2	Jefferson County.....	1
Mahoning County—		Total.....	2
Youngstown.....	6		
Marion County—			
Marion.....	1		
Total.....	16		

CEREBROSPINAL MENINGITIS—Continued.**Indiana Reports for the Months February to May, 1916.**

Place.	New cases reported.	Place.	New cases reported.
February:		April—Continued.	
Johnson County.....	1	Madison County.....	1
March:		Tippecanoe County.....	1
Clark County.....	1	Total.....	3
Marion County.....	2	May:	
Parke County.....	1	Marion County.....	2
Total.....	4	Spencer County.....	1
April:		Total.....	3
Gibson County.....	1		

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....	1	2	Newark, N. J.....	1	.....
Boston, Mass.....	1	1	New Britain, Conn.....	1	1
Chicago, Ill.....	3	1	New York, N. Y.....	5	5
Cincinnati, Ohio.....	1	1	Pasaic, N. J.....	.....	1
Columbus, Ohio.....	1	1	Racine, Wis.....	.....	1
Flint, Mich.....	1	1	St. Louis, Mo.....	1	1
Jersey City, N. J.....	.....	1	Schenectady, N. Y.....	1	.....

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2101.

ERYSIPELAS.**City Reports for Week Ended July 15, 1916.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Beaver Falls, Pa.....	1	.....	Morristown, N. J.....	1	.....
Boston, Mass.....	.....	2	Newark, N. J.....	3	.....
Braddock, Pa.....	1	.....	New York, N. Y.....	.....	3
Brockton, Mass.....	1	.....	Niagara Falls, N. Y.....	1	.....
Buffalo, N. Y.....	.....	1	Omaha, Nebr.....	1	.....
Chicago, Ill.....	6	.....	Philadelphia, Pa.....	4	.....
Cleveland, Ohio.....	3	.....	Pittsburgh, Pa.....	6	1
Cumberland, Md.....	1	.....	Portland, Oreg.....	1	.....
Detroit, Mich.....	9	1	Racine, Wis.....	1	.....
Everett, Mass.....	1	.....	Reading, Pa.....	1	.....
Flint, Mich.....	1	.....	Rochester, N. Y.....	1	.....
Jersey City, N. J.....	.....	1	Salt Lake City, Utah.....	.....	1
Milwaukee, Wis.....	1	.....	San Francisco, Cal.....	4	.....

LEPROSY.**Hawaii Report for June, 1916.**

Place.	New cases reported.	Place.	New cases reported.
Hawaii:		Hawaii—Continued.	
Hawaii—		Oahu—	
Hilo.....	1	Honolulu.....	3
North Kona District.....	1	Total.....	7
Maul—			
Hana District.....	1		
Kula District.....	.....	

LEPROSY—Continued.**City Reports for Week Ended July 15, 1916.**

During the week ended July 15, 1916, there were reported, by cities, two cases of leprosy—one case at Los Angeles, Cal., and one at San Francisco, Cal.

MALARIA.**State Reports for June, 1916.**

Place.	New cases reported.	Place.	New cases reported.
California:		Mississippi—Continued.	
Alameda County—		Lamar County.....	113
Berkeley.....	1	Lauderdale County.....	197
Butte County—		Lawrence County.....	165
Chico.....	1	Leake County.....	107
Calaveras County—		Lee County.....	192
Angels Camp.....	2	LeFlore County.....	539
Colusa County.....	7	Lincoln County.....	92
Fresno County—		Lowndes County.....	80
Firebaugh.....	4	Madison County.....	147
Kern County.....	1	Marion County.....	157
Bakersfield.....	2	Marshall County.....	169
Los Angeles County—		Monroe County.....	78
Los Angeles.....	2	Montgomery County.....	60
Marin County.....	2	Neshoba County.....	106
Merced County.....	1	Newton County.....	68
Los Banos.....	1	Noxubee County.....	69
Merced.....	2	Oktibbeha County.....	62
San Joaquin County—		Panola County.....	247
Stockton.....	3	Pearl River County.....	23
Siskiyou County.....	1	Perry County.....	72
Bolano County.....	2	Pike County.....	73
Stanislaus County.....	4	Pontotoc County.....	61
Yolo County.....	10	Prentiss County.....	48
Woodland.....	1	Quitman County.....	86
Total.....	47	Rankin County.....	340
Kansas.....	2	Scott County.....	107
Mississippi:		Sharkey County.....	95
Adams County.....	61	Simpson County.....	174
Alcorn County.....	45	Smith County.....	97
Amite County.....	57	Sunflower County.....	95
Attala County.....	180	Tallahatchie County.....	708
Benton County.....	35	Tate County.....	275
Bolivar County.....	1,009	Tippah County.....	287
Calhoun County.....	150	Tishomingo County.....	86
Carroll County.....	187	Tunica County.....	68
Chickasaw County.....	46	Union County.....	222
Choctaw County.....	50	Walthall County.....	50
Claiborne County.....	76	Warren County.....	22
Clarke County.....	56	Washington County.....	348
Clay County.....	48	Wayne County.....	632
Coahoma County.....	719	Wilkinson County.....	65
Copiah County.....	204	Winston County.....	48
Covington County.....	50	Yalobusha County.....	142
De Soto County.....	61	Yazoo County.....	97
Forrest County.....	156	Total.....	12,878
Franklin County.....	100	Virginia:	
George County.....	21	Accomac County.....	13
Grenada County.....	86	Albemarle County.....	2
Hancock County.....	105	Alexandria County.....	4
Harrison County.....	147	Alleghany County.....	1
Hinds County.....	339	Amelia County.....	13
Holmes County.....	470	Appomattox County.....	2
Issaquena County.....	74	Augusta County.....	1
Itawamba County.....	60	Brunswick County.....	16
Jackson County.....	29	Buckingham County.....	2
Jasper County.....	148	Campbell County.....	1
Jefferson County.....	109	Caroline County.....	24
Jefferson Davis County.....	38	Charles City County.....	11
Jones County.....	230	Charlotte County.....	14
Kemper County.....	85	Chesterfield County.....	19
Lafayette County.....	114	Culpeper County.....	2
		Cumberland County.....	4

MALARIA—Continued.

State Reports for June, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
Virginia—Continued.		Virginia—Continued.	
Dinwiddie County.....	19	Northumberland County.....	11
Elizabeth City County.....	5	Nottoway County.....	15
Essex County.....	7	Orange County.....	1
Fairfax County.....	13	Patrick County.....	1
Fauquier County.....	1	Pittsylvania County.....	32
Floyd County.....	1	Powhatan County.....	10
Fluvanna County.....	8	Princess Anne County.....	54
Frederick County.....	1	Prince Edward County.....	1
Gloucester County.....	14	Prince George County.....	8
Goochland County.....	3	Prince William County.....	4
Greensville County.....	51	Richmond County.....	2
Halifax County.....	38	Rockingham County.....	2
Hanover County.....	24	Russell County.....	1
Henrico County.....	33	Scott County.....	1
Henry County.....	7	Shenandoah County.....	2
Isle of Wight County.....	32	Smyth County.....	1
James City County.....	3	Southampton County.....	34
King and Queen County.....	5	Spottsylvania County.....	1
King William County.....	10	Fredericksburg.....	2
Lancaster County.....	8	Stafford County.....	6
Loudoun County.....	8	Surry County.....	6
Louisa County.....	2	Sussex County.....	7
Lunenburg County.....	31	Tazewell County.....	1
Mathews County.....	3	Warren County.....	1
Mecklenburg County.....	8	Warwick County.....	15
Middlesex County.....	53	Westmoreland County.....	1
Nansemond County.....	53	Wise County.....	2
New Kent County.....	22	York.....	70
Norfolk.....	1		
Northampton County.....	28	Total.....	956

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Berkeley, Cal.....	2	-----	Newark, N. J.....	4	-----
Birmingham, Ala.....	1	-----	New Orleans, La.....	2	-----
Cambridge, Mass.....	1	-----	Richmond, Va.....	1	-----
Camden, N. J.....	1	-----	Sacramento, Cal.....	1	1
Cincinnati, Ohio.....	1	-----	San Francisco, Cal.....	1	-----
Hartford, Conn.....	1	-----			

MEASLES.

Washington—Seattle.

Surg. Boggess reported that during the week ended July 22, 1916, 33 cases of measles were notified in Seattle, Wash., making a total of 5,329 cases, with 9 deaths, reported since the beginning of the epidemic, February 15, 1916.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 2101.

PELLAGRA.

State Reports for June, 1916.

Place.	New cases reported.	Place.	New cases reported.
Kansas:		Mississippi—Continued.	
Cherokee County.....	1	Sharkey County.....	7
Cloud County.....	1	Simpson County.....	7
Sedgwick County.....		Sunflower County.....	150
Wichita.....	1	Tallahatchie County.....	47
Total.....	3	Tate County.....	26
Mississippi:		Tippah County.....	7
Adams County.....	23	Tishomingo County.....	3
Alcorn County.....	3	Tunica County.....	51
Amite County.....	3	Union County.....	6
Attala County.....	9	Walthall County.....	3
Bolivar County.....	179	Warren County.....	11
Calhoun County.....	3	Washington County.....	68
Carroll County.....	14	Wayne County.....	6
Chickasaw County.....	10	Winston County.....	3
Choctaw County.....	3	Yalobusha County.....	9
Clay County.....	6	Yazoo County.....	43
Coahoma County.....	175	Total.....	1,453
Copiah County.....	34		
Covington County.....	6	Virginia:	
De Soto County.....	42	Amherst County.....	1
Forest County.....	19	Augusta County.....	1
Franklin County.....	3	Brunswick County.....	1
George County.....	3	Chesterfield County.....	2
Grenada County.....	4	Culpeper County.....	1
Hancock County.....	1	Cumberland County.....	1
Harrison County.....	15	Dinwiddie County.....	3
Hinds County.....	48	Elizabeth City County.....	1
Holmes County.....	24	Giles County.....	2
Issequeuna County.....	4	Goochland County.....	1
Itawamba County.....	11	Halifax County.....	2
Jackson County.....	2	Hanover County.....	2
Jasper County.....	8	Henrico County.....	
Jones County.....	19	Richmond.....	1
Kemper County.....	10	Henry County.....	1
Lafayette County.....	9	Isle of Wight County.....	1
Lamar County.....	12	King and Queen County.....	3
Lauderdale County.....	11	Louisa County.....	2
Lawrence County.....	17	Mathews County.....	1
Leake County.....	3	Middlesex County.....	1
Lee County.....	12	Montgomery County.....	2
Leflore County.....	46	Nansemond County.....	1
Lincoln County.....	27	Nelson County.....	2
Lowndes County.....	7	New Kent County.....	4
Madison County.....	11	Norfolk County.....	2
Marion County.....	13	Northampton County.....	2
Marshall County.....	26	Nottoway County.....	2
Monroe County.....	2	Patrick County.....	1
Montgomery County.....	7	Pittsylvania County—	
Neshoba County.....	13	Danville.....	4
Newton County.....	1	Powhatan County.....	1
Noxubee County.....	15	Princess Anne County.....	2
Oktibbeha County.....	1	Prince George County.....	1
Panola County.....	16	Roanoke County—	
Pearl River County.....	3	Roanoke.....	2
Perry County.....	7	Rockbridge County.....	1
Pike County.....	7	Rockingham County.....	2
Pontotoc County.....	2	Smyth County.....	1
Prentiss County.....	2	Spottsylvania County.....	4
Quitman County.....	39	Fredericksburg.....	1
Rankin County.....	5	Washington County.....	2
Scott County.....	11	Total.....	65

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....	1		Mobile, Ala.....	1	2
Boston, Mass.....	1		Nashville, Tenn.....	7	1
Charleston, S. C.....		2	New Orleans, La.....	1	2
Chattanooga, Tenn.....		2	Richmond, Va.....		1
Columbia, S. C.....		2	Roanoke, Va.....		1
Indianapolis, Ind.....	1		Washington, D. C.....	1	1

PNEUMONIA.

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Binghamton, N. Y.....	1	-----	Newark, N. J.....	13	2
Braddock, Pa.....	1	2	Ogden, Utah.....	1	1
Chicago, Ill.....	73	35	Passadena, Cal.....	1	1
Cleveland, Ohio.....	1	10	Philadelphia, Pa.....	20	8
Dubuque, Iowa.....	1	-----	Pittsburgh, Pa.....	4	7
Harrisburg, Pa.....	1	-----	Rochester, N. Y.....	4	-----
Kalamazoo, Mich.....	1	-----	San Francisco, Cal.....	7	5
Lincoln, Nebr.....	1	1	York, Pa.....	1	-----
Los Angeles, Cal.....	6	4			

POLIOMYELITIS (INFANTILE PARALYSIS).

California.

Los Angeles.—Senior Surg. Brooks reported July 31: Two cases poliomyelitis reported this week. One suspect.

Connecticut.

The Connecticut State Board of Health reported July 29: Poliomyelitis cases total to date: Counties, Fairfield 29, New Haven 54, Hartford 7, New London 15, Litchfield 4, Holland 6, Middlesex 1, Windham none.

Georgia.

Bass Ferry.—Asst. Surg. Slaughter reported July 26: One case of infantile paralysis, sporadic, at Bass Ferry, Ga., 8 miles from Rome, in a child, J. L., male, white, age 9 months.

Illinois.

The State health officer of Illinois reported July 31: During the month of July cases of acute poliomyelitis in Illinois reported and the diagnoses of which were confirmed by the epidemiologist and district health officers were as follows: Standard, 2, terminated; Streator, 1, terminated; Gibson City, 1; Kankakee, 2; Blue Island, 2, terminated; near Oregon, 2, 1 terminated; East St. Louis, 4; Belleville, 5, 4 terminated; Freeport, 2; Quincy, 1; Virden, 2; near Cherry, 2, 1 died; Eureka, 2; near Dalton City, 2; near Maroa, 2; Dixon, 2; Simpson, 1; near Beecher City, 1; Olive Branch, 1, died; Sidney, 1; Lovington, 1; near Tamms, 1, died; Carrier Mills, 1, terminated; near Kansas, 1; Benld, 1; Frankfort Heights, 2, 1 died; Elizabethtown, 1; near Galena, 1; Collinsville, 1; near Ottawa, 1; Staunton, 1; near Hinkley, 1, died; near Ridge Farm, 1, terminated; near Long Creek, 1; Oakland, 1; Bement, 1; Winnebago, 1; near Christopher, 1; Jerseyville, 1; Ottawa, 2, 1 died; near Lamont, 1; Sheldon, 1; Desplaines, 1; near Albany, 1; near Atwood, 1; Urbana, 1; Evanston, 2; near Caseyville, 2; near Triumph, 1; near Becemeyer, 1; near Carlyle, 1; Canton, 1; near Fenton, 1; and Lebanon, 1.

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**Illinois**—Continued.

Cases reported and not yet examined by representatives of the board of health are as follows: One each at Keithsburg, Chicago Heights, Mount Erie, Rock Island, Streator, Moline, St. Joseph, Decatur, and Monticello; two near Marshall, and three near Argenta.

In addition there have been 40 cases reported in Chicago.

Maryland.

Baltimore.—Surg. Vogel reported July 27: Health department confirms case poliomyelitis, M. K., 8 months old, 842 South Bond Street, isolated in municipal hospital.

Massachusetts.

Passed Asst. Surg. Bryan reported July 28: Paralytic seaman recently from New York suspicious for poliomyelitis. Ninety-five cases in State and 9 in vicinity Boston since July 1.

Michigan.

Detroit.—Senior Surg. Austin reported July 25: Health officer reports another case of infantile paralysis at Detroit. A case has been reported in a child living at Grosse Pointe Farms, which is well out in the country. July 26: Board of health to-day reports one new case of infantile paralysis in a boy of 3 years, at 494 Belvidere Street. July 28: Board of health yesterday reported a case in a child 2 years old, located at 183½ Porter Street, making a total of 6 cases of the disease reported in Detroit since July 1, 1916, summarized as follows: L. G., 85 Adele Street, aged 2 years; B. R., 31 Dey Street, aged 2 years; E. C., 154½ Brooklyn Avenue; J. M., 494 Belvidere Avenue; F. M., 325 Charlevoix Street; M. S., aged 2 years, at 183½ Porter Street.

Montana.

The State health officer of Montana reported August 1: One case infantile paralysis at Great Falls and one at Bozeman.

New Jersey.

Perth Amboy.—Acting Asst. Surg. Naulty reported August 1: Week ending yesterday, 3 new cases poliomyelitis, 3 deaths; totals, 10 cases, 4 deaths.

New York.

New York City.—Surg. Lavinder reported July 27: New cases poliomyelitis 151, deaths 31. July 28: New cases 134, deaths 35. July 29: New cases 161, deaths 44. Manhattan still high; Queens

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**New York**—Continued.

appears slowly increasing. July 31: New cases reported yesterday 145, deaths 13; to-day, cases 130, deaths 35. Situation unchanged. August 1: New cases 159, deaths 55. August 2: New cases 166, deaths 41; approximate totals, 4,289 cases, 937 deaths. Brooklyn showing slight increase again; Manhattan continues high but not rising.

North Carolina.

Newbern.—Dr. J. F. Rhem, quarantine officer at Newbern, N. C., reported July 27: Case infantile paralysis in Newbern.

Ohio.

Cincinnati.—Asst. Surg. Bolten reported July 25: A case of anterior poliomyelitis in a female child, age 11 months, was notified July 24. This makes the second case reported to the health department since July 12, with one death, which occurred in the first case.

Cleveland.—Surg. Holt reported July 31: One new case poliomyelitis, no deaths, last week; totals, 13 cases, 2 deaths.

Pennsylvania.

Philadelphia.—Senior Surg. Irwin reported July 31: There were reported in Philadelphia 16 cases of poliomyelitis for the week ended July 29, 1916. There seems to be a small but steady increase in these cases.

Pittsburgh.—Surg. Schereschewsky reported July 27: Additional case poliomyelitis reported; total 5 cases, with 1 death.

Rhode Island.

Passed Asst. Surg. Marshall reported July 31: Poliomyelitis in the State of Rhode Island for the 7 days ended July 30, 1916: Providence 8 cases, 1 death; Newport 7 cases, 2 deaths; Bristol 2 cases, 1 death; Pawtucket 5 cases; Westerly 1 case; Woonsocket 1 case; Tiverton 1 case; Warwick 1 case; total, 26 cases, 4 deaths.

Washington.

Collaborating Epidemiologist Tuttle reported July 24: Three cases of infantile paralysis; 1 case in Chelan County, 2 cases in King County outside of the city of Seattle. The latter 2 cases came to Washington direct from Montana.

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

State Reports for June, 1916.

Place.	New cases reported.	Place.	New cases reported.
California:		Mississippi—Continued.	
Los Angeles County—		Marion County.....	8
Los Angeles.....	1	Noxubee County.....	1
San Francisco.....	2	Rankin County.....	2
San Joaquin County—		Scott County.....	2
Stockton.....	1	Simpson County.....	6
Total.....	4	Warren County.....	1
Hawaii:		Washington County.....	1
Kauai—		Yalobusha County.....	1
Kauai District.....	1	Lincoln County.....	1
Indiana:		Total.....	57
Vanderburg County.....	1	Montana:	
Iowa:		Lincoln County.....	1
Des Moines County.....	1	Ohio:	
Kansas:		Allen County.....	1
Cowley County.....	1	Ashland County.....	1
Greenwood County.....	1	Cuyahoga County—	
Total.....	2	Cleveland.....	2
Mississippi:		Gallia County.....	1
Bolivar County.....	1	Lucas County.....	2
Chickasaw County.....	1	Total.....	7
Clay County.....	1	Virginia:	
Coahoma County.....	1	Bland County.....	1
Copiah County.....	1	Charlotte County.....	1
Covington County.....	2	Halifax County.....	1
Harrison County.....	2	Nansemond County.....	1
Hinds County.....	1	Nelson County.....	4
Holmes County.....	2	New Kent County.....	1
Jackson County.....	2	Page County.....	1
Jasper County.....	3	Tazewell County.....	1
Jefferson Davis County.....	2	Total.....	11
Lawrence County.....	13	Washington:	
Lee County.....	1	King County—	
Madison County.....	1	Auburn.....	1

State Reports for May, 1916.

During the month of May, 1916, there were reported, by States, one case of poliomyelitis (infantile paralysis) at Putnam County, Ind., one case at Linn County, Oreg., and one case at Union County, Oreg.

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Bayonne, N. J.....	1	.....	New Orleans, La.....	1	1
Buffalo, N. Y.....	1	1	Newport, R. I.....	2	.....
Chicago, Ill.....	4	.....	Newton, Mass.....	1	1
Cincinnati, Ohio.....	1	1	New York, N. Y.....	933	169
Cleveland, Ohio.....	4	.....	Orange, N. J.....	3	.....
Cumberland, Md.....	1	.....	Pawtucket, R. I.....	4	.....
Detroit, Mich.....	2	.....	Perth Amboy, N. J.....	3	.....
Galveston, Tex.....	1	.....	Pittsburgh, Pa.....	1	.....
Grand Rapids, Mich.....	1	.....	Pittsfield, Mass.....	1	.....
Harrison, N. J.....	1	.....	Providence, R. I.....	2	1
Hartford, Conn.....	2	1	Quincy, Ill.....	1	.....
Indianapolis, Ind.....	1	.....	Richmond, Va.....	1	.....
Jersey City, N. J.....	5	.....	St. Louis, Mo.....	1	1
Kearny, N. J.....	1	1	San Francisco, Cal.....	1	.....
Lawrence, Mass.....	1	1	Toledo, Ohio.....	9	2
Lincoln, Nebr.....	1	.....	Trenton, N. J.....	2	.....
Mobile, Ala.....	2	.....	Washington, D. C.....	2	.....
Newark, N. J.....	65	18	West Hoboken, N. J.....	1	.....
New Bedford, Mass.....	1	.....	Worcester, Mass.....	3	1
New London, Conn.....	1	1			

RABIES IN ANIMALS.**City Reports for Week Ended July 15, 1916.**

During the week ended July 15, 1916, there were reported, by cities, four cases and one fatal case of rabies in animals; three cases at Detroit, Mich., one case at Syracuse, N. Y., and one fatal case at Ann Arbor, Mich.

ROCKY MOUNTAIN SPOTTED FEVER.**Oregon Report for May, 1916.**

During the month of May, 1916, one case of Rocky Mountain spotted fever was notified in Grant County, Oreg.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2101.

SMALLPOX.**Minnesota.**

Collaborating Epidemiologist Bracken reported by telegraph that during the week ended July 29, 1916, one new focus of smallpox infection was reported in Minnesota, one case of the disease having been notified at Kasota, Lesueur County.

Porto Rico.

Surg. King reported by telegraph, July 31, 1916, that during the two weeks period ended July 30, smallpox was reported in Porto Rico as follows: Cataño, 2 cases; San Juan, 2 cases.

Texas—Galveston.

Surg. Bahrenburg reported by telegraph that on July 27, 1916, a case of smallpox was notified at Galveston, Tex.

State Reports for June, 1916.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within seven years preceding attack.	Number last vaccinated more than seven years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California:						
Alameda County—						
Oakland.....	1					1
Imperial County.....	2			2		
San Bernardino County.....	1				1	
Redlands.....	1				1	
Total.....	5			2	2	1

SMALLPOX—Continued.

State Reports for June, 1916—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within seven years preceding attack.	Number last vaccinated more than seven years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Kansas:						
Allen County.....	5					5
Barber County.....	1				1	
Brown County.....	9				9	
Butler County.....	4					4
Chase County.....	1				1	
Cherokee County.....	2					2
Cowley County.....	2				2	
Crawford County.....	1				1	
Pittsburg.....	4				1	3
Decatur County.....	7				4	
Ford County.....	3					3
Greenwood County.....	2					2
Jefferson County.....	3			1	1	1
Jewell County.....	2				2	
Labette County—						
Parsons.....	32					32
Lane County.....	3		2		1	
Lyon County.....	2				2	
Marion County.....	1				1	
Marshall County.....	4					4
Montgomery County.....	4				4	
Coffeyville.....	10				10	
Morris County.....	3				3	
Morton County.....	1				1	
Neosho County.....	4					4
Osage County.....	1				1	
Osborne County.....	14				12	2
Reno County.....	10				7	3
Sedgwick County.....	12					12
Wichita.....	8					8
Shawnee County—						
Topeka.....	4			1	3	
Smith County.....	6				5	1
Stevens County.....	1				1	
Sumner County.....	1					1
Wabaunsee County.....	1					1
Wilson County.....	1					1
Wyandotte County—						
Kansas City.....					1	10
Total.....	180		2	2	74	102
Ohio:						
Ashtabula County—						
Ashtabula.....	1				1	
Butler County—						
Hamilton.....	2				2	
Clark County—						
Springfield.....	1				1	
Columbiana County—						
East Liverpool.....	6				5	1
Coshocton County.....	9					9
Cuyahoga County—						
Cleveland.....	3					3
Guernsey County.....	2				2	
Hamilton County—						
Cincinnati.....	1					1
Henry County.....	2				2	
Lucas County—						
Toledo.....	21					21
Mahoning County—						
Youngstown.....	22				9	13
Ottawa County.....	1				1	
Sandusky County.....	1					1
Summit County—						
Akron.....	2				1	1
Trumbull County—						
Niles.....	4					4
Woods County.....	16				9	7
William County.....	3				1	2
Total.....	97				34	63

SMALLPOX—Continued.

Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Colorado (June 1-30):			Indiana—Continued		
Counties—			Counties—Continued.		
Boulder.....	1		Gibson.....	2	
Denver.....	4		Greene.....	2	
Kit Carson.....	3		Howard.....	6	
Larimer.....	2		Jasper.....	1	
Total.....	10		Madison.....	2	
Indiana (Feb. 1-29):			Marshall.....	1	
Counties—			Miami.....	16	
Adams.....	7		Vanderburg.....	25	
Allen.....	3		Vermillion.....	1	
Bartholomew.....	1		Vigo.....	5	
Delaware.....	2		Warren.....	1	
Fountain.....	5		Total.....	69	
Gibson.....	7		Indiana (June 1-30):		
Jasper.....	20		Counties—		
Knox.....	5		Allen.....	2	
Kosciusko.....	1		Cass.....	2	
Marshall.....	1		Clinton.....	1	
Miami.....	3		Dearborn.....	3	
Newton.....	1		Delaware.....	1	
Parke.....	20		Gibson.....	1	
Pike.....	4		Greene.....	3	
Vanderburg.....	31		Harrison.....	7	
Vermillion.....	2		Howard.....	42	
Warren.....	1		Johnson.....	4	
Total.....	114		Kosciusko.....	2	
Indiana (Mar. 1-31):			Lake.....	1	
Counties—			Madison.....	2	
Adams.....	1		Marion.....	1	
Benton.....	1		Miami.....	10	
Carroll.....	1		Parke.....	12	
Clinton.....	1		St. Joseph.....	8	
Dekalb.....	1		Vanderburg.....	2	
Fountain.....	10		Vermillion.....	4	
Knox.....	4		Vigo.....	2	
Lake.....	1		Wabash.....	2	
Laporte.....	23		Total.....	112	
Morgan.....	1		Iowa (June 1-30):		
Parke.....	8		Counties—		
Pike.....	10		Benton.....	12	
Posey.....	3		Cherokee.....	2	
Pulaski.....	5		Franklin.....	2	
Starke.....	1		Hardin.....	1	
Vanderburg.....	30		Johnson.....	6	
Vermillion.....	27		Linn.....	3	
Vigo.....	1		Louisa.....	3	
Warren.....	6		Marshall.....	2	
Washington.....	1		Monona.....	1	
Total.....	136		Pocahontas.....	1	
Indiana (Apr. 1-30):			Polk.....	2	
Counties—			Pottawattamie.....	3	
Boone.....	8		Scott.....	5	
Dekalb.....	5		Sioux.....	5	
Gibson.....	11		Tama.....	2	
Jasper.....	2		Webster.....	3	
Knox.....	5		Woodbury.....	1	
Kosciusko.....	1		Worth.....	10	
Laporte.....	3		Wright.....	6	
Marion.....	7		Total.....	68	
Pike.....	3		Mississippi (June 1-30):		
Spencer.....	4		Counties—		
Tippecanoe.....	3		Bolivar.....	1	
Vanderburg.....	2		Harrison.....	10	
Vermillion.....	1		Hinds.....	6	
Warrick.....	2		Holmes.....	10	
White.....	3		Issaquena.....	4	
Total.....	60		Jasper.....	7	
Indiana (May 1-31):			Jefferson Davis.....	1	
Counties—			Jones.....	18	
Boone.....	5		Lauderdale.....	8	
Delaware.....	1		Leflore.....	11	
Elkhart.....	1		Marion.....	6	
			Panola.....	5	

SMALLPOX—Continued.

Miscellaneous State Reports—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Mississippi—Continued.			Oregon (May 1-31):		
Counties—Continued.			Clackamas County.....	1	
Rankin.....	4		Crook County.....	1	
Washington.....	1		Harney County.....	1	
Total.....	92		Multnomah County—		
Montana (June 1-30):			Portland.....	1	
Cascade County.....	24		Total.....	4	
Great Falls.....	4		Virginia (June 1-30):		
Chouteau County.....	6		Alleghany County.....	1	
Chester County.....	4		Buchanan County.....	11	
Dawson County.....	1		Giles County.....	1	
Deer Lodge County—			Halifax County.....	3	
Anaconda.....	1		Henrico County.....	1	
Fallon County.....	1		Northumberland County.....	10	
Fergus County.....	10		Page County.....	4	
Hill County.....	6		Roanoke County—		
Powell County.....	1		Roanoke.....	1	
Phillips County.....	1		Rockingham County.....	1	
Sheridan County.....	1		Warwick County.....	1	
Silverbow County—			Wise County.....	10	
Butte.....	4		Total.....	44	
Teton County.....	9		Washington (June 1-30):		
Toole County.....	1		Adams County.....	1	
Yellowstone County.....	2		Asotin County.....	10	
Billings.....	3		Clark County.....	38	
Total.....	79		King County.....	12	
North Dakota (June 1-30):			Seattle.....	29	
Counties—			Klickitat County.....	4	
Burleigh.....	1		Pierce County—		
Cass.....	1		Tacoma.....	1	
Foster.....	1		Skagit County.....	1	
Golden Valley.....	14		Spokane County.....	14	
Kidder.....	8		Spokane.....	4	
McLean.....	3		Whatcom County.....	3	
Stutsman.....	8		Bellingham.....	3	
Ward.....	2		Whitman County.....	1	
Williams.....	1		Yakima County.....	1	
Total.....	39		Total.....	122	
Oregon (Apr. 1-30):			Wyoming (June 1-30):		
Clatsop County.....	2		Counties—		
Hood River County.....	3		Campbell.....	1	
Jefferson County.....	2		Natrona.....	11	
Linn County.....	1		Hot Springs.....	1	
Multnomah County.....	2		Total.....	14	
Portland.....	3				
Total.....	13				

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Austin, Tex.....	2		Little Rock, Ark.....	1	
Cleveland, Ohio.....	2		Los Angeles, Cal.....	1	
Columbus, Ohio.....	2		Milwaukee, Wis.....	1	
Davenport, Iowa.....	1		New Orleans, La.....	12	1
Detroit, Mich.....	7		Oklahoma, Okla.....	2	
Eglin, Ill.....	4		Omaha, Nebr.....	1	
Grand Rapids, Mich.....	1		Rock Island, Ill.....	1	
Kalamazoo, Mich.....	1		St. Joseph, Mo.....	1	
Kansas City, Mo.....	2		South Bend, Ind.....	2	
Kokomo, Ind.....	5		Toledo, Ohio.....	2	
Lincoln, Nebr.....	1		Wichita, Kans.....	1	

TETANUS.

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.		1	Fall River, Mass.	1	
Chicago, Ill.	1	2	Los Angeles, Cal.	2	1
Cleveland, Ohio.	1	1	Philadelphia, Pa.	2	1
Columbus, Ohio.		1			

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2101.

TYPHOID FEVER.

State Reports for June, 1916.

Place.	New cases reported.	Place.	New cases reported.
California:		California—Continued.	
Alameda County—		Sutter County—	
Berkeley.	1	Yuba City.	1
Oakland.	3	Total.	141
Colusa County.	2		
Contra Costa County.	1	Hawaii:	
Pittsburg.	1	Hawaii—	
Fresno County.	2	North Hilo District.	1
Clovis.	1	South Kona District.	1
Firebaugh.	1	Kauai—	
Fresno.	1	Lihue District.	8
Glenn County.	1	Maul—	
Humboldt County—		Puunene and Kihei District.	1
Blue Lake.	1	Oahu—	
Imperial County—		Ewa District.	2
El Centro.	3	Honolulu.	2
Kern County.	13	Koolauloa District.	5
Bakersfield.	5	Total.	20
Maricopa.	17		
Taft.	11	Indiana:	
Kings County.	1	Cass County.	1
Lake County—		Clark County.	7
Lakeport.	1	Clinton County.	2
Los Angeles County.	4	Dearborn County.	3
Long Beach.	2	Decatur County.	1
Los Angeles.	16	Delaware County.	2
Marin County—		Dubois County.	2
San Rafael.	1	Elkhart County.	2
Monterey County.	1	Floyd County.	3
Orange County.	1	Fountain County.	1
Santa Ana.	1	Gibson County.	3
Riverside County.	4	Greene County.	1
Corona.	1	Hancock County.	1
Sacramento County.	2	Harrison County.	1
Sacramento.	4	Howard County.	1
San Bernardino County—		Jackson County.	1
Redlands.	3	Jefferson County.	1
San Diego County—		Johnson County.	2
San Diego.	1	Kosciusko County.	2
San Francisco.	14	Lake County.	51
San Joaquin County.	3	Madison County.	3
Lodi.	1	Marion County.	14
Stockton.	2	Montgomery County.	1
San Luis Obispo County—		Pike County.	2
Arroyo Grande.	1	Ripley County.	3
San Mateo County—		Scott County.	3
Burlingame.	1	St. Joseph County.	4
San Mateo.	1	Switzerland County.	5
Santa Barbara County—		Vanderburg County.	1
Santa Barbara.	3	Vigo County.	1
Santa Clara County.	1	Warrick County.	3
Gilroy.	1	Washington County.	6
Shasta County.	1	White County.	1
Solano County.	1	Total.	135
Sonoma County—			
Santa Rosa.	1		
Stanislaus County.	1		
Oakdale.	1		

TYPHOID FEVER—Continued.

State Reports for June, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
Kansas:		Mississippi—Continued.	
Atchison County—		Monroe County.....	8
Atchison.....	1	Montgomery County.....	1
Brown County.....	2	Neshoba County.....	8
Butler County.....	6	Newton County.....	4
Chase County.....	1	Noxubee County.....	10
Cowley County.....	3	Oktibbeha County.....	2
Crawford County.....	1	Panola County.....	15
Dickinson County.....	2	Pearl River County.....	7
Doniphan County.....	2	Perry County.....	8
Douglas County.....	1	Pike County.....	10
Edwards County.....	2	Pontotoc County.....	3
Elk County.....	1	Prentiss County.....	12
Greenwood County.....	1	Quitman County.....	4
Jackson County.....	3	Rankin County.....	7
Jewell County.....	2	Scott County.....	6
Labette County—		Simpson County.....	18
Parsons.....	6	Smith County.....	9
Marshall County.....	1	Sunflower County.....	31
Miami County.....	1	Tallahatchie County.....	22
Montgomery County.....	3	Tate County.....	19
Neosho County.....	2	Tippah County.....	15
Osage County.....	1	Tishomingo County.....	10
Republic County.....	1	Tunica County.....	3
Sedgewick County—		Union County.....	4
Wichita.....	2	Walthall.....	4
Seward County.....	1	Warren County.....	3
Wilson County.....	1	Washington County.....	18
Woodson County.....	1	Wayne County.....	5
Total.....	48	Wilkinson County.....	1
Mississippi:		Winston County.....	6
Adams County.....	11	Yalobusha County.....	21
Alcorn County.....	3	Yazoo County.....	8
Amite County.....	5	Total.....	825
Attala County.....	7	Montana:	
Bolivar County.....	44	Blaine County.....	1
Calhoun County.....	22	Carbon County.....	1
Carroll County.....	8	Cascade County—	
Chickasaw County.....	11	Great Falls.....	5
Choctaw County.....	1	Chouteau County.....	4
Claiborne County.....	4	Dawson County.....	1
Clarke County.....	11	Flathead County.....	1
Clay County.....	3	Kalispell.....	1
Coalhoma County.....	22	Lewis and Clark County—	
Copiah County.....	46	Helena.....	1
Covington County.....	1	Park County.....	1
De Soto County.....	16	Wibaux County.....	1
Forest County.....	8	Yellowstone County.....	1
Franklin County.....	1	Total.....	18
Green County.....	41	North Dakota:	
Grenada County.....	3	Adams County.....	1
Hancock County.....	13	Stutsman County.....	1
Harrison County.....	9	Total.....	2
Hinds County.....	31	Ohio:	
Holmes County.....	21	Adams County.....	2
Isseguena County.....	5	Allen County—	
Itawamba County.....	1	Lima.....	2
Jackson County.....	2	Ashland County—	
Jasper County.....	3	Ashland.....	1
Jefferson County.....	1	Ashtabula County.....	1
Jefferson Davis County.....	8	Athens County.....	2
Jones County.....	24	Belmont County—	
Kemper County.....	3	Bellaire.....	1
Lafayette County.....	16	Butler County.....	1
Lamar County.....	15	Champaign County.....	3
Lauderdale County.....	15	Clark County.....	4
Lawrence County.....	4	Clermont County.....	2
Leake County.....	4	Clinton County.....	1
Lee County.....	18	Columbiana County.....	20
Leflore County.....	15	Crawford County.....	2
Lincoln County.....	11	Cuyahoga County—	
Lowndes County.....	8	Cleveland.....	9
Madison County.....	12		
Marion County.....	7		
Marshall County.....	7		

TYPHOID FEVER—Continued.

State Reports for June, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
Ohio—Continued.		Virginia—Continued.	
Darke County—		Clarke County.....	1
Greenville.....	1	Culpeper County.....	1
Defiance County—		Elizabeth City County.....	1
Defiance.....	1	Essex County.....	2
Delaware County.....	1	Floyd County.....	3
Erie County.....	4	Franklin County.....	4
Franklin County.....	67	Frederick County.....	2
Gallia County.....	2	Gloucester County.....	4
Guernsey County.....	3	Grayson County.....	3
Hamilton County—		Greene County.....	1
Cincinnati.....	2	Greensville County.....	5
Henry County.....	1	Halifax County.....	13
Highland County.....	3	Hanover County.....	6
Huron County.....	2	Henrico County.....	1
Jackson County—		Richmond.....	9
Jackson.....	1	Henry County.....	9
Jefferson County.....	9	Highland County.....	1
Lawrence County.....	12	Isle of Wight County.....	3
Licking County.....	2	James City County.....	2
Logan County.....	26	King William County.....	3
Lorain County—		Lancaster County.....	3
Lorain.....	1	Lee County.....	7
Lucas County.....	10	Loudoun County.....	3
Madison County.....	1	Lunenburg County.....	3
Mahoning County.....	11	Madison County.....	3
Miami County—		Mecklenburg County.....	11
Piqua.....	2	Montgomery County.....	2
Montgomery County.....	2	Nansemond County.....	10
Morrow County.....	2	Nelson County.....	4
Muskingum County.....	2	New Kent County.....	8
Paulding County.....	4	Norfolk County.....	4
Perry County.....	2	Norfolk.....	3
Pike County.....	3	Portsmouth.....	1
Preble County.....	2	Northampton County.....	2
Putnam County.....	1	Northumberland County.....	1
Ross County.....	2	Nottoway County.....	1
Sandusky County—		Page County.....	1
Fremont.....	1	Patrick County.....	4
Scioto County—		Pittsylvania County.....	2
Portsmouth.....	1	Danville.....	5
Seneca County—		Powhatan County.....	2
Fostoria.....	1	Princess Anne County.....	3
Shelby County.....	2	Prince Edward County.....	6
Stark County—		Prince George County.....	2
Canton.....	3	Pulaski County.....	4
Summit County.....	18	Rappahannock County.....	1
Tuscarawas County.....	3	Richmond County.....	1
Union County.....	1	Roanoke County.....	3
Van Wert County.....	1	Rockbridge County.....	1
Washington County.....	1	Rockingham County.....	7
Wayne County.....	2	Russell County.....	13
Williams County.....	1	Scott County.....	1
Wood County.....	3	Shenandoah County.....	4
Wyandot County.....	2	Smith County.....	3
Total.....	273	Southampton County.....	3
Virginia:		Spottsylvania County.....	1
Accomac County.....	10	Fredericksburg.....	1
Albemarle County.....	9	Stafford County.....	1
Alexandria County.....	1	Surrey County.....	4
Alleghany County.....	4	Sussex County.....	7
Amelia County.....	3	Tazewell County.....	3
Amherst County.....	2	Warwick County.....	4
Appomattox County.....	8	Washington County.....	11
Augusta County.....	7	Westmoreland County.....	2
Bedford County.....	5	Wise County.....	4
Bland County.....	1	Wythe County.....	12
Botetourt County.....	2	York County.....	3
Brunswick County.....	2	Total.....	341
Buckingham County.....	1	Washington:	
Campbell County.....	7	Benton County.....	2
Lynchburg.....	5	Chelan County.....	2
Caroline County.....	8	Clarke County.....	1
Carroll County.....	2	Douglas County.....	1
Charles City County.....	2	Grant County.....	1
Charlotte County.....	1	King County.....	1
		Seattle.....	1

TYPHOID FEVER—Continued.

State Reports for June, 1916—Continued.

Place.	New cases reported.	Place.	New cases reported.
Washington—Continued.		Wyoming:	
Lincoln County.....	7	Goshen County.....	1
Pierce County—		Uinta County.....	1
Tacoma.....	2	Washakie County.....	1
San Juan County.....	2	Total.....	3
Snohomish County.....	1		
Everett.....	2		
Spokane County.....	1		
Spokane.....	3		
Wahkiakum County.....	1		
Yakima County.....	4		
Total.....	32		

State Reports for April, 1916.

Place.	New cases reported.	Place.	New cases reported.
Indiana:		Indiana—Continued.	
Adams County.....	1	Miami County.....	2
Blackford County.....	1	Randolph County.....	2
Clark County.....	8	Ripley County.....	2
Clinton County.....	1	Sullivan County.....	2
De Kalb County.....	2	Switzerland County.....	1
Delaware County.....	3	Wayne County.....	1
Elkhart County.....	1	Total.....	151
Floyd County.....	2		
Greene County.....	3	Oregon:	
Hancock County.....	1	Clackamas County.....	1
Harrison County.....	1	Columbia County.....	1
Howard County.....	3	Coos County.....	1
Jackson County.....	5	Linn County.....	3
Johnson County.....	7	Multnomah County—	
Kosciusko County.....	2	Portland.....	4
Lake County.....	81	Umatilla County.....	3
Laporte County.....	8	Total.....	13
Lawrence County.....	2		
Madison County.....	2		
Marion County.....	7		

State Reports for May, 1916.

Place.	New cases reported.	Place.	New cases reported.
Indiana:		Indiana—Continued.	
Allen County.....	3	Marion County.....	8
Clinton County.....	1	Miami County.....	2
Daylesburg County.....	1	Ripley County.....	1
DeKalb County.....	1	St. Joseph County.....	4
Delaware County.....	7	Vanderburg County.....	3
Elkhart County.....	1	Wayne County.....	1
Floyd County.....	4	Total.....	111
Fountain County.....	1		
Hamilton County.....	1	Oregon:	
Hancock County.....	1	Benton County.....	1
Harrison County.....	1	Clackamas County.....	1
Hendricks County.....	1	Marion County.....	1
Henry County.....	1	Multnomah County—	
Howard County.....	1	Portland.....	6
Johnson County.....	8	Total.....	9
Kosciusko County.....	1		
Lake County.....	58		

TYPHOID FEVER—Continued.

Indiana Reports for February and March, 1916.

Place.	New cases reported.	Place.	New cases reported.
February—		March—	
Cass County.....	1	Cass County.....	3
Clark County.....	5	Delaware County.....	2
Dearborn County.....	1	Greene County.....	1
Delaware County.....	4	Harrison County.....	4
Jackson County.....	1	Hendricks County.....	5
Jefferson County.....	2	Jennings County.....	8
Johnson County.....	3	Johnson County.....	11
Lake County.....	40	Lake County.....	58
Laporte County.....	2	Laporte County.....	7
Lawrence County.....	3	Lawrence County.....	2
Madison County.....	2	Madison County.....	24
Marion County.....	49	Marion County.....	16
Marshall County.....	1	Martin County.....	6
Martin County.....	8	Pike County.....	1
Monroe County.....	1	Porter County.....	1
Montgomery County.....	2	Posey County.....	2
Orange County.....	1	Randolph County.....	1
Pike County.....	2	Rush County.....	4
Posey County.....	2	Scott County.....	1
Rush County.....	1	St. Joseph County.....	2
Scott County.....	1	Vanderburg County.....	1
St. Joseph County.....	2	White County.....	1
Switzerland County.....	1		
Tipton County.....	1	Total.....	161
Vanderburg County.....	2		
Vermillion County.....	2		
Warren County.....	1		
Wayne County.....	1		
Total.....	142		

City Reports for Week Ended July 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	4	2	Hartford, Conn.....	1	
Albany, N. Y.....	2		Indianapolis, Ind.....	8	
Ann Arbor, Mich.....	1		Jackson, Mich.....	1	
Atlantic City, N. J.....	2		Johnstown, Pa.....	1	
Austin, Tex.....	6	2	Kalamazoo, Mich.....	1	1
Baltimore, Md.....	13	2	Kansas City, Mo.....	5	2
Binghamton, N. Y.....	2		Lexington, Ky.....	3	1
Birmingham, Ala.....	97	12	Little Rock, Ark.....	1	
Boston, Mass.....	5		Long Branch, N. J.....	1	
Buffalo, N. Y.....	3		Los Angeles, Cal.....	4	2
Butler, Pa.....		1	Lynchburg, Va.....	3	
Charleston, S. C.....	7	3	Lynn, Mass.....	1	
Chattanooga, Tenn.....	4	1	Marquette, Wis.....	1	
Chelsea, Mass.....		1	Melrose, Mass.....	1	
Chicago, Ill.....	12	2	Milwaukee, Wis.....	5	1
Chilcopee, Mass.....	2		Mobile, Ala.....	1	1
Cincinnati, Ohio.....	3		Morristown, N. J.....	1	
Cleveland, Ohio.....	2		Nashville, Tenn.....	17	2
Coffeyville, Kans.....	1		Newark, N. J.....	1	
Columbia, S. C.....	5		New Bedford, Mass.....	1	
Columbus, Ohio.....	5	2	New Orleans, La.....	3	2
Cumberland, Md.....	2		New York, N. Y.....	27	3
Danville, Ill.....	1		Norfolk, Va.....	52	2
Denver, Colo.....	4		North Adams, Mass.....	1	
Detroit, Mich.....	17		Oklahoma, Okla.....	2	
Dubuque, Iowa.....	2	1	Omaha, Nebr.....	2	
Duluth, Minn.....	4		Orange, N. J.....	1	
Elgin, Ill.....	6		Passaic, N. J.....	1	
El Paso, Tex.....		1	Philadelphia, Pa.....	15	4
Erie, Pa.....	1		Pittsburgh, Pa.....	6	1
Fall River, Mass.....	10		Plainfield, N. J.....		1
Fitchburg, Mass.....	1		Portland, Me.....	3	
Flint, Mich.....	1	1	Portsmouth, Va.....	6	
Galveston, Tex.....	2		Providence, R. I.....	2	
Grand Rapids, Mich.....	7		Reading, Pa.....	2	
Harrisburg, Pa.....	2		Richmond, Va.....	6	1

TYPHOID FEVER—Continued.**City Reports for Week Ended July 15, 1916—Continued.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Roanoke, Va.	1		Springfield, Ohio.	1	
Rochester, N. Y.	2		Taunton, Mass.	1	
Sacramento, Cal.	1		Trenton, N. J.	1	
Saginaw, Mich.	1		Washington, D. C.	6	3
St. Joseph, Mo.	1		Wheeling, W. Va.	4	
St. Louis, Mo.	5	1	Wichita, Kans.	2	
Salt Lake City, Utah.	2		Wilkes-Barre, Pa.	1	
San Francisco, Cal.	2		Wilmington, N. C.	2	
Schenectady, N. Y.	3		York, Pa.	3	
South Bend, Ind.	2		Zanesville, Ohio.	2	
Springfield, Mass.	1				

TYPHUS FEVER.**California—Los Angeles.**

Dr. W. A. Sawyer, secretary of the California State Board of Health, reported by telegraph August 1, 1916, that 2 cases of typhus fever were notified at Los Angeles, Cal., July 29.

Texas—El Paso.

Acting Asst. Surg. Tappan reported July 21, 1916, that a new case of typhus fever was notified at El Paso, Tex., in the person of F. G., male, aged 40 years, found sick at 400½ South El Paso Street. The patient came from San Marcial, Mexico, about July 7, arriving in El Paso about July 14, 1916.

Dr. Tappan states that the case reported July 16 had been proven not a case of typhus fever. This report was published in the Public Health Reports of July 21, 1916, on page 1938.

California Report for June, 1916.

During the month of June, 1916, there were two cases of typhus fever reported in California.

City Reports for Week Ended July 15, 1916.

During the week ended July 15, 1916, there were reported, by cities, four cases and one death from typhus fever; two cases at Evansville, Ind., one case at Los Angeles, Cal., and one case at New York, N. Y., and one death at Los Angeles, Cal.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.**State Reports for June, 1916.**

Place.	Cases reported.			Place.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
California	248	291	180	Montana	15	363	39
Hawaii	10	177		North Dakota	13	164	29
Indiana	99	4,044	140	Ohio	337	4,325	419
Iowa	23		49	Virginia	51	3,165	38
Kansas	60	1,220	76	Washington	27	2,186	29
Mississippi	27	115	26	Wyoming	2	30	13

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

State Reports for April, 1916.

During the month of April, 1916, 141 cases of diphtheria, 4,464 cases of measles, and 325 cases of scarlet fever were reported in Indiana; and 25 cases of diphtheria, 326 cases of measles, and 52 cases of scarlet fever were reported in Oregon.

State Reports for May, 1916.

During the month of May, 1916, 106 cases of diphtheria, 5,035 cases of measles, and 219 cases of scarlet fever were reported in Indiana; and 9 cases of diphtheria, 230 cases of measles, and 43 cases of scarlet fever were reported in Oregon.

Indiana Reports for February and March, 1916.

During the month of February, 1916, 125 cases of diphtheria, 1,712 cases of measles, and 406 cases of scarlet fever, and during the month of March, 1916, 150 cases of diphtheria, 3,456 cases of measles, and 362 cases of scarlet fever were reported in Indiana.

City Reports for Week Ended July 15, 1916.

City.	Population as of July 1, 1915. (Estimated by U. S. Census Bu- reau.)	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	584,605	183	12	2	43	1	15	.....	49	19
Boston, Mass.	745,139	199	45	1	167	5	14	.....	62	24
Chicago, Ill.	2,447,045	552	90	18	119	2	77	1	297	76
Cleveland, Ohio.	656,975	189	13	2	59	.....	9	1	38	16
Detroit, Mich.	554,717	53	8	12	1	17	1	23	16	16
New York, N. Y.	5,468,190	1,460	283	21	481	15	96	.....	370	139
Philadelphia, Pa.	1,683,664	484	41	10	94	1	12	.....	122	71
Pittsburgh, Pa.	571,984	214	10	1	78	2	7	.....	23	21
St. Louis, Mo.	745,988	172	40	4	71	2	10	.....	31	51
From 300,000 to 500,000 inhabit- ants:										
Buffalo, N. Y.	461,335	109	3	1	9	.....	12	1	38	13
Cincinnati, Ohio.	406,706	137	11	3	18	.....	3	.....	33	17
Jersey City, N. J.	300,133	82	1	1	10	.....	6	.....	14	11
Los Angeles, Cal.	465,367	.....	7	.....	24	1	5	.....	56	18
Milwaukee, Wis.	428,062	85	5	.....	25	1	19	2	21	9
Newark, N. J.	399,000	131	19	.....	68	2	17	.....	44	12
New Orleans, La.	366,484	.....	2	.....	31	.....	.....	.....	30	25
San Francisco, Cal.	1,416,912	115	17	2	7	.....	5	.....	28	16
Washington, D. C.	358,679	129	8	.....	115	2	1	.....	22	6
From 200,000 to 300,000 inhabit- ants:										
Columbus, Ohio.	209,722	67	.....	.....	12	.....	4	.....	7	5
Denver, Colo.	253,161	.....	5	.....	12	.....	5	.....	.....	7
Indianapolis, Ind.	265,578	.....	4	.....	114	.....	4	.....	22	.....
Kansas City, Mo.	289,879	.....	7	3	12	.....	6	.....	5	8
Portland, Oreg.	272,833	42	2	.....	23	1	12	.....	7	4
Providence, R. I.	250,025	87	7	1	3	.....	10	.....	2	6
Rochester, N. Y.	250,747	69	4	1	70	.....	2	.....	8	5
From 100,000 to 200,000 inhabit- ants:										
Albany, N. Y.	103,580	.....	3	.....	8	.....	1	.....	7	.....
Birmingham, Ala.	174,108	44	.....	.....	1	.....	.....	.....	11	3
Cambridge, Mass.	111,669	.....	6	.....	41	.....	4	.....	10	7
Camden, N. J.	104,349	.....	4	.....	6	.....	1	.....	5	.....
Fall River, Mass.	126,904	.....	.....	.....	8	.....	.....	.....	9	4

¹ Population Apr. 15, 1910; no estimate made.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended July 15, 1916—Continued.

City.	Population as of July 1, 1915. (Estimated by U. S. Census Bu- reau.)	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 100,000 to 200,000 inhabit- ants—Continued.										
Grand Rapids, Mich.	125,759	31	7		12		10		10	1
Hartford, Conn.	108,969		8		1		2			
Lowell, Mass.	112,124		4	2	111	2	1		3	2
Lynn, Mass.	100,316	19	9	1			2		2	1
Nashville, Tenn.	115,978	48	1		12		1		6	5
New Bedford, Mass.	114,694	23	2		4		3		6	3
New Haven, Conn.	147,095		2		19	1	1		5	3
Omaha, Nebr.					5		4			25
Reading, Pa.	105,094	29	3		2		1		4	1
Richmond, Va.	154,674	73	1	1	19		8		10	9
Salt Lake City, Utah.	113,567	19	5		64		9			1
Springfield, Mass.	103,216	32	1	1	9	1	7		2	1
Syracuse, N. Y.	152,534	39	4		19		3		5	6
Tacoma, Wash.	108,094	12			8					
Toledo, Ohio.	187,840	56	1		25		17	2		4
Trenton, N. J.	109,212	36	8				1		5	4
Worcester, Mass.	160,523	70	5	1	19				10	4
From 50,000 to 100,000 inhabit- ants:										
Akron, Ohio.	82,958	29	5		4		2			
Atlantic City, N. J.	55,806		2		5				3	
Bayonne, N. J.	67,582		1		8		3		1	
Berkeley, Cal.	54,879	8					1		1	
Binghamton, N. Y.	53,082	21	4		25	1			2	4
Brockton, Mass.	65,746	13			3				4	
Canton, Ohio.	59,139	12	1		3		3		1	1
Charleston, S. C.	60,427	35			4					3
Chattanooga, Tenn.	58,576	24					1		1	1
Covington, Ky.	36,520	11	1		1				2	
Duluth, Minn.	91,913				2		2		4	
Elizabeth, N. J.	84,550	14	4		1		3		16	7
El Paso, Tex.	51,936	26	1				1			7
Erie, Pa.	73,798				13		1		14	32
Evansville, Ind.	72,125		3		2				3	4
Flint, Mich.	52,159	13	1		2					
Harrisburg, Pa.	70,754	28	3		4					3
Hoboken, N. J.	76,104	14	2		5		2		9	2
Johnstown, Pa.	66,585				4		1		5	2
Lancaster, Pa.	50,269		1		23				2	
Lawrence, Mass.	98,197	27			1				13	2
Little Rock, Ark.	55,158	28							1	1
Malden, Mass.	50,067	5	1		10		1		5	
Manchester, N. H.	76,959	16							1	1
Mobile, Ala.	56,536	23			3				3	3
New Britain, Conn.	52,203	2			2					
Norfolk, Va.	88,076	43			2				2	2
Oklahoma, Okla.	88,158	14	1		3		5		3	1
Passaic, N. J.	69,010	18	2		2		1		4	
Pawtucket, R. I.	58,156	16	2			2	1			
Portland, Me.	63,014	14	4		1					2
Rockford, Ill.	53,761				2		1		1	1
Sacramento, Cal.	64,806	19	1				1		4	2
Saginaw, Mich.	54,815				1		1	1		1
San Diego, Cal.	51,115	20	6		12		1		3	3
Schenectady, N. Y.	95,265	15	1		9		1		2	2
Sioux City, Iowa.	55,588		3		4		2			
Somerville, Mass.	85,460	14	1		13		1		3	
South Bend, Ind.	67,030	15			6		3			
Springfield, Ill.	59,468	18							2	1
Springfield, Ohio.	50,894	14							5	2
St. Joseph, Mo.	83,974	25	1			1	2		2	3
Troy, N. Y.	77,738				4				3	
Wichita, Kans.	67,847				1					1
Wilkes-Barre, Pa.	75,218	18	1		1				6	
York, Pa.	50,543		4		2				2	
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,031	3	1							
Auburn, N. Y.	36,947	8			8					
Austin, Tex.	34,016		1				1			1
Bellingham, Wash.	31,609	4			1					
Brookline, Mass.	31,934	4					1		1	

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended July 15, 1916—Continued.

City.	Population as of July 1, 1915. (Estimated by U. S. Census Bu- reau.)	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabit- ants—Continued.										
Butler, Pa.	26,587	7	2		3				4	
Butte, Mont.	42,918	30			1				4	1
Chelsea, Mass.	32,452	7			1		3		1	
Chicopee, Mass.	28,688	7			10					
Columbia, S. C.	34,058	15								
Cumberland, Md.	25,564	9	1		1					
Danville, Ill.	31,554	3							2	
Davenport, Iowa.	47,127						6			
Dubuque, Iowa.	39,650				7		1			
East Orange, N. J.	41,155	5	1		18				4	
Elgin, Ill.	27,844	13							1	1
Everett, Mass.	38,307		1						3	
Everett, Wash.	33,767	5			4				2	
Fitchburgh, Mass.	41,144	7	1		39				3	1
Galveston, Tex.	41,076	9	1						1	1
Hamilton, Ohio.	39,655	8							2	
Haverhill, Mass.	47,774	10	2		2		2		1	
Jackson, Mich.	34,730				11		2		1	
Kalamazoo, Mich.	47,364	16	2		8		1		3	
Kenosha, Wis.	30,319	4			9				1	
La Crosse, Wis.	31,522		1							
Lexington, Ky.	39,703		1		1				1	2
Lincoln, Nebr.	46,028	8								
Long Beach, Cal.	26,012	9	1							
Lorain, Ohio.	35,662	1	2							
Lynchburg, Va.	32,385	14			1				1	
Madison, Wis.	30,084	1					1			
McKeesport, Pa.	46,743	22	5		5					
Montclair, N. J.	25,550	6			2				2	
New Castle, Pa.	46,351				1					
Newport, Ky.	31,722	5							3	3
Newport, R. I.	29,631	6	1	1	2					
Newton, Mass.	43,085				7					
Niagara Falls, N. Y.	36,240	14			4				3	3
Norristown, Pa.	30,833	10		1						1
Ogden, Utah.	30,466	8	1		1		2			
Orange, N. J.	32,524	10			11		1			1
Pasadena, Cal.	43,859	7					1		3	1
Perth Amboy, N. J.	39,725		1		1		2			
Pittsfield, Mass.	37,580	12	3							
Portsmouth, Va.	38,610	13								2
Quincy, Ill.	36,764	15	1		1					1
Quincy, Mass.	37,251	12	2		1		2		5	
Racine, Wis.	45,507	13	1		2		2			3
Roanoke, Va.	41,929	11	3		8					1
Rock Island, Ill.	27,961	5								
San Jose, Cal.	37,994	4	2							
Steubenville, Ohio.	26,631	18								
Stockton, Cal.	34,508	8								1
Superior, Wis.	45,285	13			1	1	1		1	
Taunton, Mass.	35,957	13							2	4
Waltham, Mass.	30,129	8			1					
West Hoboken, N. J.	41,893	5	3		1		1		5	
Wheeling, W. Va.	43,097	13								
Williamsport, Pa.	33,495		1		1				3	
Wilmington, N. C.	28,264	15								1
Zanesville, Ohio.	30,406	9	2							
From 10,000 to 25,000 inhabitants:										
Ann Arbor, Mich.	14,979	6								
Beaver Falls, Pa.	13,316						1			
Braddock, Pa.	21,310		2						1	
Cairo, Ill.	15,593	5			3					2
Clinton, Mass.	13,075	1			3					
Coffeyville, Kans.	16,765				1				2	
Concord, N. H.	22,480	10	1		11					2
Galesburg, Ill.	23,923	4			11					1
Harrison, N. J.	16,555		1		2				1	
Kearny, N. J.	22,753	6	2		3		1		2	
Kokomo, Ind.	20,312	5			1					

¹ Population Apr. 15, 1910; no estimate made.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended July 15, 1916—Continued.

City.	Population as of July 1, 1915. (Estimated by U. S. Census Bureau.)	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 10,000 to 25,000 inhabit- ants—Continued.										
Long Branch, N. J.	15,057	1	1						1	
Marinette, Wis.	¹ 14,610				9					
Melrose, Mass.	17,166	4								
Morristown, N. J.	13,158	4			2		1			
Nanticoke, Pa.	22,441	3								
North Adams, Mass.	¹ 22,019	5			13					
Northampton, Mass.	19,846	4			20				2	1
Newburyport, Mass.	15,195	5	1		3					
New London, Conn.	20,771	7	1		6		1		1	
Plainfield, N. J.	23,280	5					1			
Rutland, Vt.	14,624	1					5			
Sandusky, Ohio.	20,160				27					
Saratoga Springs, N. Y.	12,842	4							1	1
Steelton, Pa.	15,337	5			1				3	
Wilkinsburg, Pa.	22,361	4					1		3	
Woburn, Mass.	15,862	1								

¹ Population Apr. 15, 1910; no estimate made.

FOREIGN.

CHINA.

Examination of Rats—Shanghai.

During the week ended June 17, 1916, 333 rats were examined at Shanghai. No plague infection was found.

The finding of the last plague-infected rat at Shanghai was reported for the week ended May 6, 1916.

CUBA.

Measures against Importation of Poliomyelitis.

Under date of July 8, 1916, measures to prevent the importation of poliomyelitis were ordered to be enforced at Cuban ports as follows:

All children under 7 years of age coming from the United States, on arrival at ports in Cuba, shall be carefully inspected, and in case of showing elevation of temperature or any symptom indicating an abnormal condition shall be removed to hospital or isolated on board, immediate notice of the facts being given to the quarantine service. Children who appear to be perfectly well are admitted freely, care being taken to learn their destination and to give notice to the respective local health authorities.

On July 24, 1916, the first requirement was amended as follows: "All children less than 12 years."

GREAT BRITAIN.

Examination of Rats—Liverpool.

During the two weeks ended July 1, 1916, 513 rats were examined at Liverpool. No plague infection was found.

MEXICO.

Measures Against Importation of Poliomyelitis.

According to information dated July 28, 1916, 10 days' quarantine has been ordered to be enforced at all Mexican ports against vessels arriving from New York, on account of poliomyelitis.

PERSIA.

Cholera—Mohammerah.

Cholera was reported present, June 12, 1916, at Mohammerah, on the frontier of Persia and Asiatic Turkey.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During Week Ended Aug. 4, 1916.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	June 4-17	13	6	
Calcutta	May 27-June 3		43	
Henzada	do		1	
Indo-China:				
Saigon	May 29-June 11	52	14	
Java				East Java, May 6-19, 1916: Cases, 5; deaths, 2.
				West Java, May 18-24, 1916: Cases, 13; deaths, 11.
Batavia	May 18-24		11	
Surabaya residency	May 6-19	5	2	Including Malang, 2 cases, and Sidoarjo and Malang, 3 cases with 2 deaths.
Persia:				
Asterabad	June 10			Present, with 4 or 5 deaths daily.
Ghazian	June 13	2	1	
Mohammerah	June 12			Present.
Philippine Islands:				
Provinces	June 11-17	28	22	
Straits Settlements:				
Singapore	May 27-June 3	1	1	

PLAGUE.

China:				
Hongkong	May 28-June 17	6	6	
Egypt				Jan. 1-June 29, 1916: Cases, 1,634; deaths, 792.
Alexandria	June 16-28	9	4	
Port Said	June 18-28	5	2	
Provinces—				
Assiout	June 29	1	1	
Beni-Souef	June 16-25	7	4	
Fayoum	June 17-28	16	6	
Girgeh	June 21	1	1	
Menouefieh	June 16-29	7	3	
Minieh	June 17-29	8	3	
India				May 28-June 3, 1916: ¹ Cases, 445; deaths, 353.
Bassein	May 21-June 3		43	
Bombay	June 4-17	39	31	
Calcutta	May 28-June 3		4	
Karachi	May 29-June 17	23	20	
Madras Presidency	June 4-17	28	22	
Rangoon	May 28-June 3	33	33	Apr. 16-22, 1916: Cases, 54; deaths, 52.
Indo-China:				
Saigon	May 22-June 11	31	16	
Java:				
Residencies—				
Kediri	May 6-19	8	8	
Paseroean	do	1	1	
Surabaya	do	5	5	Surabaya City, May 13-19: Cases 3; deaths, 3.
Surakarta	do		9	

¹ From medical officers of the Public Health Service, American consuls, and other sources.

² Reports for weeks ended May 20 and 27, 1916, not received.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received During Week Ended Aug. 4, 1916—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Rio de Janeiro.....	May 14-June 17...	52	10	
China:				
Antung.....	June 12-18.....		1	Present.
Chungking.....	May 21-June 10.....			
Harbin.....	May 9-14.....		1	Do.
Hongkong.....	May 27-June 17.....	21	16	
Nanking.....	June 11-17.....			
Tientsin.....	May 21-June 17.....	17	6	
Egypt:				
Alexandria.....	June 11-17.....	1	1	
France:				
Paris.....	May 27-June 3.....	1		
Greece:				
Athens.....	Apr. 1-June 13.....	178	37	
India:				
Bombay.....	June 4-10.....	33	23	
Calcutta.....	May 27-June 3.....		1	
Madras.....	June 4-17.....	25	14	
Japan:				
Kobe.....	June 12-25.....	3	1	
Nagasaki.....	June 26-July 2.....	1	1	
Java.....				East Java, May 6-19, 1916: Cases, 6; deaths, 1.
Batavia.....	May 18-24.....		1	
Blora and Malang.....	May 13-19.....	4	1	
Kraksan and Soemenap.....	May 6-12.....	2		Mid-Java, May 6-12, 1916: Cases, 15; deaths, 8.
Surabaya.....	May 6-19.....	2	1	West Java, May 18-24, 1916: Cases, 18; deaths, 4.
Mexico:				
Aguascalientes.....	June 26-July 16.....		20	
Porto Rico:				
Cataño.....	July 17-30.....	2		
San Juan.....	do.....	2		
Portugal:				
Lisbon.....	June 25-July 1.....	5		
Russia:				
Moscow.....	May 28-June 16.....	76	20	
Petrograd.....	May 21-27.....	12	6	
Spain:				
Valencia.....	June 25-July 1.....	2	1	
Straits Settlements:				
Penang.....	May 14-20.....	3		
Singapore.....	May 21-27.....	2	2	
Switzerland:				
Basel.....	June 4-17.....	11		

TYPHUS FEVER.

Canada:				
New Brunswick—				
St. John.....	July 29.....	4		
China:				
Antung.....	June 19-25.....	1		
Egypt:				
Alexandria.....	June 10-17.....	58	14	
Germany:				
Bremen.....	June 18-24.....	1		
Hanover.....	May 14-20.....	2		
Greece:				
Saloniki.....	May 29-June 11.....		12	
Java.....				May 6-24, 1916: Cases, 20; deaths, 5.
Surabaya.....	May 6-12.....	2	2	
Mexico:				
Aguascalientes.....	June 26-July 16.....		25	
Russia:				
Moscow.....	May 28-June 17.....	329	23	
Petrograd.....	May 21-27.....	5	3	
Turkey in Asia:				
Mersina.....	Apr. 2-8.....	3		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to 28, 1916.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.....				Mar. 12-May 6, 1916: Cases, 425; deaths, 155.
Austria.....	Mar. 26-Apr. 8.....	2		
Bosnia-Herzegovina.....	Mar. 12-Apr. 29.....	397	147	
Hungary.....	Mar. 20-Apr. 2.....	2		
Ceylon:				
Colombo.....	May 7-20.....	43	5	From s. s. Hong-Kheng from Haifong. Total to June 1: Cases, 61; deaths, 37.
Egypt:				
Suez.....	May 18-20.....	5	2	
Tor, quarantine station.....	May 22-June 3.....	112	42	
India:				
Bassein.....	Apr. 23-29.....		1	
Bombay.....	May 14-June 3.....	6	3	
Calcutta.....	May 7-28.....		92	
Henzada.....	Apr. 23-May 20.....		4	
Rangoon.....	May 21-27.....	1	1	
Indo-China.....				Dec. 1-31, 1915: Cases, 540; deaths, 395. Jan. 1-Feb. 29, 1916: Cases 1,332; deaths, 762.
Provinces—				
Anam.....	Dec. 1-31.....	493	388	
Do.....	Jan. 1-Feb. 29.....	1,295	738	
Cambodia.....	do.....	11	10	
Cochin China.....	do.....	6	1	
Tonkin.....	Dec. 1-31.....	17	7	
Do.....	Jan. 1-Feb. 29.....	20	13	
Saigon.....	May 1-21.....	39	3	
Java.....				East Java, Apr. 8-14, 1916: Cases, 2; deaths, 2. West Java, Apr. 13-26, 1916: Cases, 45; deaths, 40.
Batavia.....	Apr. 13-May 4.....	35	65	
Malang.....	Apr. 8-14.....	2	2	
Malang and Djombang.....	Apr. 28-May 5.....	2	2	
Persia:				
Foumen.....	May 9.....	3	2	Previously erroneously included in cases at Recht.
Philippine Islands:				
Manila.....	May 14-June 3.....	20	13	Not previously reported: Cases, 5; deaths, 1.
Provinces:				May 1-27, 1916: Cases, 12; deaths, 10.
Laguna.....	May 21-June 10.....	14	7	
Lanao.....	May 28-June 3.....	110	88	
Mindoro.....	May 21-27.....	7	7	
Rizal.....	May 21-June 10.....	6	5	
Siam:				
Bangkok.....	May 15-27.....	4	4	
Turkey:				
Constantinople.....	June 14.....			Present among soldiers.
Smyrna.....	To June 14.....			Epidemic. Estimated number cases daily, 50.
At sea:				
Steamship Hong-Kheng.....	Apr. 27-May 9.....	17	14	En route from Haifong. Indo-China, to Colombo.
Steamship Pei-ho.....	Apr. 19-30.....	1	1	From Saigon, Indo-China, for Marseille.
Do.....	May 5-17.....	8	8	From Colombo for Suez.

PLAGUE.

Ceylon:				
Colombo.....	Apr. 30-May 6.....	3	3	
Chile:				
Mejillones.....	May 28-June 3.....	1		
Antofagasta.....	June 4-10.....	1		
Egypt:				Jan. 1-June 8, 1916: Cases, 1,520; deaths, 747.
Alexandria.....	May 26-June 14.....	18	13	
Port Said.....	May 28-June 9.....	3	3	
Provinces—				
Assiout.....	May 27-June 8.....	8	7	
Beni-Souef.....	May 26-June 14.....	27	11	
Fayoum.....	May 26-June 13.....	95	39	
Galioubek.....	June 7.....	1		
Girgeh.....	June 9.....	2		
Menoufieh.....	June 12.....	1	1	
Minieh.....	May 29-June 15.....	27	10	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—
 Continued.

Reports Received from July 1 to 28, 1916—Continued.
PLAGUE—Continue 1.

Place.	Date.	Cases.	Deaths.	Remarks.
Ecuador:				
Ambato.....	May 1-31.....	.....	.....	Epidemic.
Bahia.....	do.....	.....	.....	Country district, vicinity of
Guayaquil.....	do.....	3	2	Bahia.
Mania.....	do.....	.....	.....	Country district, vicinity of
India.....				Mania.
Bassein.....	Apr. 23-May 20.....	.....	105	May 7-13, 1916: Cases, 1,502;
Bombay.....	May 14-June 3.....	204	185	deaths, 1,138.
Calcutta.....	May 7-27.....	.....	5	
Henzada.....	Apr. 23-May 20.....	.....	6	
Karachi.....	May 14-27.....	47	41	
Madras Presidency.....	May 14-June 3.....	64	43	
Mandalay.....	do.....	.....	1	
Moulmein.....	Apr. 23-May 20.....	.....	28	
Prome.....	do.....	.....	1	
Rangoon.....	Apr. 23-May 27.....	157	146	
Indo-China.....				Dec. 1-31, 1915: Cases, 90; deaths,
Provinces—				70. Jan. 1-Feb. 29, 1916: Cases,
Anam.....	Dec. 1-31.....	36	20	205; deaths, 153.
Do.....	Jan. 1-Feb. 29.....	79	62	
Cambodia.....	Dec. 1-31.....	27	36	
Do.....	Jan. 1-Feb. 29.....	77	71	
Cochin China.....	Dec. 1-31.....	4	1	
Do.....	Jan. 1-Feb. 29.....	49	20	
Tonkin.....	Dec. 1-31.....	23	23	
Saigon.....	May 15-21.....	8	4	
Java.....				East Java, Apr. 9-15, 1916: Cases,
Residences—				33; deaths, 32.
Kediri.....	Apr. 9-May 5.....	10	10	
Paseroe n.....	do.....	6	5	
Surabaya.....	do.....	18	16	Including Surabaya city and
Surakarta.....	do.....	15	15	district.
Mauritius.....	Apr. 15.....	5	8	
Persia:				
Recht.....	May 2-19.....	20	14	
Siam:				
Bangkok.....	Apr. 30-May 30.....	32	28	
Straits Settlements:				
Singapore.....	Apr. 30-May 20.....	3	1	
Union of South Africa:				
Orange Free State.....	Jan. 23-Mar. 26.....	36	23	Remaining under treatment Mar.
				26, 6 cases.

SMALLPOX.

Australia:				
New South Wales—				
Narrabri.....	May 26-June 7....	8	.....
Austria-Hungary:				Feb. 13-19, 1916: Cases, 1,536.
Austria.....				
Vienna.....	May 27-June 10....	3	1	
Hungary:				
Budapest.....	May 21-June 17....	30	14	
Brasil:				
Rio de Janeiro.....	Apr. 9-May 13.....	42	8	
Santos.....	May 8-14.....	.....	1	
Canada:				
Ontario—				
Fort William and Port				
Arthur.....	July 9-15.....	1	.....
Niagara Falls.....	July 2-8.....	1	.....
Toronto.....	June 25-July 1....	2	.....
Ceylon:				
Colombo.....	May 7-20.....	2	.....
China:				
Antung.....	May 22-28.....	2	.....
Dairen.....	May 21-27.....	1	.....
Chungking.....	May 7-13.....	.....	.....	Present.
Foochow.....	May 7-27.....	.....	.....	Do.
Harbin.....	May 2-8.....	2	.....
Hongkong.....	May 7-27.....	41	29	
Tientsin.....	May 14-20.....	23	4	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from July 1 to 28, 1916—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
East Africa:				
Mombasa.....	Apr. 21-30.....	3	1	
Egypt:				
Alexandria.....	May 28-June 10....	3	1	
Cairo.....	Jan. 22-Feb. 11....	6	1	
France:				
Paris.....	May 14-27.....	5		
Germany:				
Breslau.....	May 21-27.....	1		
Hamburg.....	June 11-17.....	1		
Great Britain:				
Cardiff.....	June 4-17.....	1	1	
London.....	do.....	1		
India:				
Bassein.....	May 7-13.....		2	
Bombay.....	May 14-27.....	96	39	
Calcutta.....	May 7-27.....		2	
Madras.....	May 14-June 3.....	66	19	
Rangoon.....	Apr. 23-May 27.....	128	39	
Indo-China:				Dec. 1-31, 1915: Cases, 74; deaths, 14. Jan. 1-Feb. 29, 1916: Cases, 134; deaths, 16.
Provinces—				
Anam.....	Dec. 1-31.....	48		
Do.....	Jan. 1-Feb. 29.....	24		
Cambodia.....	Dec. 1-31.....	19	13	
Do.....	Jan. 1-Feb. 29.....	37	14	
Cochin China.....	Dec. 1-31.....	1	1	
Do.....	Feb. 1-29.....	10		
Tonkin.....	Dec. 1-31.....	6		
Do.....	Jan. 1-Feb. 29.....	63	2	
Japan:				
Kobe.....	May 29-June 11....	21	3	
Java:				East Java, Apr. 8-14: Cases, 7 deaths, 7. Mid-Java, Apr. 1-May 5, 1916: Cases, 128; deaths, 10. West Java, Apr. 13-May 17, 1916: Cases, 91; deaths, 23.
Batavia.....	Apr. 13-May 17.....	7	4	
Sitoebondolo.....	Apr. 8-14.....	1	1	
Toeban and Bosjonegoro.....	do.....	6	6	
Mexico:				
Aguaascalientes.....	June 12-25.....		21	
Frontera.....	May 28-June 10....	4	1	
Guadalajara.....	June 11-17.....	35	9	
Mazatlan.....	May 31-June 6.....		4	
Tenosique.....	June 14.....			175 miles south of Frontera. Epidemic among troops.
Vera Cruz.....	June 4-July 9.....	5	10	
Netherlands:				
Amsterdam.....	May 28-June 3.....	1		
Philippine Islands:				
Manila.....	do.....	1		
Porto Rico:				June 19-25, 1916: Cases, 33.
Agua Buenas.....	June 19-25.....	5		
Arecibo.....	do.....	2		
Bayamon.....	June 19-July 2.....	2		
Naranjito.....	June 26-July 2.....	4		
Rio Piedras.....	do.....	1		
San Juan.....	do.....	24		
Toa Alta.....	do.....	12		
Portugal:				
Lisbon.....	May 21-June 24....	10		
Russia:				
Moscow.....	Apr. 30-May 20....	132	32	
Riga.....	Apr. 6-12.....	1		
Petrograd.....	Apr. 23-May 19....	113	21	
Siam:				
Bangkok.....	May 24-30.....	2		
Spain:				
Madrid.....	May 1-31.....		13	
Valencia.....	May 21-June 3.....	10	3	
Straits Settlements:				
Singapore.....	Apr. 30-May 6.....	2	1	
Switzerland:				
Basel.....	May 13-June 3.....	14		
At sea:				
Steamship Katuna.....				Case of smallpox landed at Colombo, Ceylon, May 12, 1916. Vessel arrived May 27 at Fremantle, Australia, was ordered into quarantine and proceeded to Melbourne direct for disinfection.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—
Continued.

Reports Received from July 1 to 28, 1916—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Austria.....				Feb. 13-26, 1916: Cases, 845.
Hungary.....				Feb. 21-Mar. 5, 1916: Cases, 33;
Budapest.....	May 21-June 17...	13	2	deaths, 7.
China:				
Harbin.....	May 2-8.....	1		
Tientsin.....	May 14-20.....		1	
Egypt:				
Alexandria.....	May 21-June 10...	139	69	
Cairo.....	Jan. 8-Feb. 11.....	41	21	
Germany:				
Chemnitz.....	May 28-June 3.....		1	
Frankfort-on-Main.....	June 11-17.....		1	
Hanover.....	May 7-13.....	2		
Königsberg.....	June 4-10.....	1		
Leipzig.....	do.....		1	
Greece:				
Saloniki.....	May 1-14.....		6	
Japan:				
Tokyo.....	May 22-June 8.....	65		Jan. 1-June 8, 1916: Cases, 417.
Java:				East Java, Apr. 8-May 5, 1916:
Batavia.....	Apr. 13-May 17...	32	10	Cases, 4; deaths, 4. Mid-Java,
Samarang.....	Apr. 1-28.....	8	4	Apr. 1-28, 1916: Cases, 30;
Surabaya.....	Apr. 8-May 5.....	4	4	deaths, 6. West Java, Apr. 13-
Mexico:				May 17, 1916: Cases, 53; deaths,
Aguascalientes.....	June 12-25.....		26	13.
Guadalajara.....	June 11-17.....	4	1	
Vera Cruz.....	June 4-9.....		2	
Russia:				
Moscow.....	Apr. 30-May 20...	538	24	
Petrograd.....	Apr. 23-May 6.....	11	2	
Switzerland:				
Geneva.....	May 21-27.....	1		
Turkey in Asia:				
Adana.....	May 13.....			Present.
Haifa.....	Apr. 24-30.....	5	1	
Jaffa.....	Apr. 23-29.....			Mar. 19-25, 1916: Present.
Mersina.....	May 7-13.....	5		
Tarsus.....	May 13.....			Present.

YELLOW FEVER.

Ecuador:				
Guayaquil.....	May 1-31.....	21	17	
Mexico:				
Merida.....	July 19.....	3		

SANITARY LEGISLATION.

COURT DECISIONS.

VIRGINIA SUPREME COURT OF APPEALS.

Sewage—Discharge into Tidal Waters by Municipality—Pollution of Oyster Beds.

CITY OF HAMPTON v. WATSON. (June 8, 1916.)

A municipality has the right to discharge sewage into tidal waters, subject to the control of the State legislature, and a person who leases oyster beds from the State with knowledge of the polluted condition of the beds can not recover damages from the municipality because of such pollution.

[89 Southeastern Reporter, 81.]

HARRISON, J.: This action of trespass on the case was brought by S. J. Watson, sr., against the city of Hampton to recover damages for its alleged unlawful pollution of the waters of Hampton Creek by the sewers of the defendant city emptying therein, whereby the oyster bed of the plaintiff was materially damaged. The trial in the circuit court resulted in a verdict and judgment in favor of the plaintiff for \$4,500, which we are asked to review and reverse.

It appears from the record that the city of Hampton is situated on the waters of Hampton Creek, which is a large tidal, navigable body of salt water—an arm of the sea. The plaintiff is in possession of and rents from the State of Virginia three pieces of oyster planting ground, aggregating about 11 acres, located in Hampton Creek and within the corporate limits of the city of Hampton. The lease of one piece of this oyster planting ground, containing 5 acres, expired in 1912, and was not renewed until after the institution of this suit in 1915, although the plaintiff during the interval paid the taxes thereon to the State without any reassignment having been made to him.

The city of Hampton constructed its sewers in 1899-1900, and in 1908, after an extension of the city limits, it constructed additional sewers, all of which empty into Hampton Creek at various places. It further appears that long prior to the construction by the defendant city of its sewer system there were, and still are, private sewers and overhanging closets which emptied into these waters, including the county poor-house, the normal school, with 1,100 Negro and Indian pupils and teachers, and the National Soldiers' Home, with over 3,000 inmates, and that such sewers and closets have continuously, and do now, drain and empty directly into Hampton Creek, and are not connected with any city sewer. The evidence shows that the sewerage from these private sources is many times more than sufficient to pollute the waters in question, so as to forbid the sale of oysters directly therefrom. It further appears that in the summer of 1909 the oyster planters in Hampton Creek were notified by the health officer of the county that those waters were too polluted to permit the sale of oysters therefrom, and again in 1914 the United States health authorities made an examination and found that the waters were too polluted for oysters to be sold directly therefrom, and thereupon the pure food and dairy department of the State of Virginia notified the defendant in error, among others, that they would not be per-

mitted to sell their oysters without first transplanting them to unpolluted waters. It is not pretended that the defendant was guilty of any negligence in the construction of its sewer system; nor is there any complaint that these waters, as a result of its sewerage, create offensive odors or are obnoxious to persons navigating the same, or to those on the shores in close proximity thereto. The sole complaint is the detriment done to the plaintiff's oyster bed.

In the view we take of this case, it is only necessary to consider one of the defenses relied on by the city of Hampton. That contention is that the city is under no liability to the plaintiff for the reason that the beds and waters of Hampton Creek below low-water mark, being tidal, navigable salt waters, are held in trust by the State of Virginia for the public, and can not be granted to an individual so as to impair the public interests therein or the use thereof.

Counsel for the plaintiff, in support of their contention that the city is liable in damages to the plaintiff for the detriment done his oyster bed by emptying its sewerage into these waters, cites a number of cases in which recovery has been had for the pollution of nonnavigable streams or for emptying by cities of sewers upon private property. These cases are, however, not analogous to the case at bar. The question of the pollution of nonnavigable streams and the beds thereof, which are owned by the riparian owners, as they own the adjacent land, has been frequently considered, and the right to recover damages in such cases upheld in this State. There is, however, a marked and well-established distinction between the pollution of a small nonnavigable stream and the pollution of large tidal, navigable bodies of salt water, for the reason that in the first case the bed of the stream and the waters are owned by the riparian owners, while in the latter case it is well settled that the bed of the navigable, tidal salt water and the waters themselves are owned and controlled by the State for the use and benefit of all the public, subject only to navigation. It is for the State to say what uses shall be made thereof and by whom, subject always to the right of the public, and for the State, through the legislative branch of the government, to say how much pollution it will permit to be emptied into and upon its waters, so long as the owners of the land between low-water and high-water mark are not injured, and there is no such claim in this case.

From the early English decisions to the present time, and repeatedly by this court, it has been held that the tidal, navigable salt waters, and the beds thereof, belong to the Commonwealth, in a sovereign capacity, for the benefit of all the public, and can not be disposed of to the detriment of the public interest. *Taylor v. Commonwealth*, 102 Va. 768, 47 S. E. 875; *N. N. S. B. & D. D. Co. v. Jones*, 105 Va. 503, 54 S. E. 314; *Ill. Cent. R. Co. v. Illinois*, 146 U. S. 387, 13 Sup. Ct. 110; *Sayre v. Newmark*, 60 N. J. Eq. 361, 45 Atl. 985; *Coxe v. State*, 144 N. Y. 396, 39 N. E. 400.

* * * * *

The State guards the health of its people for the benefit and protection of the public at large, and under present sanitary standards sewerage systems for all thickly settled communities have become an imperative necessity, a public right, which is superior to the leasing by the State of a few acres of oyster land within the corporate limits of a city to an individual at \$1 per acre per annum. When the plaintiff leased this land he took it with full knowledge of the then existing sewerage emptying into Hampton Creek and subject to the public right to increase the same as necessity required on account of the growth in population of the city of Hampton.

In conclusion we are of opinion, in the light of the authorities cited, that the defendant city was acting within its lawful right in emptying the sewerage complained of into the waters of Hampton Creek, and that any injury occasioned the private oyster bed of the plaintiff thereby was *damnum absque injuria*. * * *

CARDWELL, J., absent.

NORTH CAROLINA SUPREME COURT.

Nuisances—Stables—Ordinances Prohibiting Location in Certain Places Held not Valid.

STATE v. BASS. (Mar. 1, 1916.)

The defendant was convicted in the county court of violating the following ordinance of the town of Nashville, N. C.:

No person or persons, firm, or corporation shall build or cause to be erected any privy, stables, or stalls nearer to a neighbor's residence than it is to the owner's; and no privy shall be constructed nearer than 25 feet of any public street, under penalty of \$25 for each offense. Each day's continuance of such privy, stables, or stalls after notice by the sanitary officer shall constitute a separate offense.

He was charged with erecting his stable nearer to the home of his neighbor than to his own. The supreme court reversed the judgment and decided that the ordinance was void.

The court (Brown, J.) said:

It is contended that this ordinance is invalid because it is unreasonable and not uniform, in that it does not afford protection to all citizens alike and is not reasonably appropriate for the accomplishment of any legitimate object falling within the police power of the State. (6 Ruling Case Law, § 226.) The objection is well taken, as the ordinance manifestly fails to accomplish any purpose properly falling within the scope of the police power. (*Chicago, B. & Q. R. R. Co. v. Illinois*, 200 U. S. 561, 26 Sup. Ct. 341, 50 L. Ed. 596; 4 Ann. Cas. 1175; 6 Ruling Case Law, § 226, and notes.) Its purpose is presumed to be to improve the health of the inhabitants of the town, as well as to minister to their comfort. It fails conspicuously to accomplish such purpose, as under it stables may be kept with impunity obnoxiously near any number of dwellings if they are equally as near the dwelling of the owner of the stables. Thus it is put within the power of the owner to annoy his neighbor at will if he is willing to endure the same annoyance himself.

Chief Justice Clarke dissented.

The case is reported in 87 Southeastern Reporter, page 972.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

MASSACHUSETTS.

Tuberculosis—Hospitals—Establishment and Maintenance by Counties for Cities and Towns Having Less than 50,000 Inhabitants. (Ch. 286, Act June 1, 1916.)

SECTION 1. The county commissioners of each county in the Commonwealth, except Suffolk, Nantucket, and Dukes County, are hereby authorized and directed to provide adequate hospital care for all those persons residing in cities or towns having less than 50,000 population, as determined by the latest United States census, within the boundaries of their respective counties and suffering from consumption, who are in need of such hospital care and for whom adequate hospital provision does not already exist. The said hospital provision shall be available for patients on or before the first day of January, 1918; but if, in order to comply with the provisions of this section, it is necessary for any county to construct a new building at an expense exceeding \$10,000, including any necessary payment for land, or to make substantial additions to or alterations in an existing building at an expense exceeding \$10,000, such new construction, addition, or alteration need not be completed until the 1st day of September, 1918.

SEC. 2. A contract entered into before January 1 of the year 1917 for a term of years not less than 5 nor more than 25, and approved by the State department of health after a petition made to the said department and a public hearing thereon, between (a) boards of county commissioners of two adjoining counties, or (b) boards of county commissioners of any county and the legally constituted authorities of any city within the same county, or (c) either county commissioners or the legally constituted authorities of cities of 50,000 or more inhabitants and the trustees or authorities of any existing or future privately endowed tuberculosis institution, or the trustees of any fund available for the purpose of supplying hospital facilities for persons suffering from consumption, for the express purpose of supplying, within a reasonable time as provided in the conditions of approval of the State department of health, and guaranteeing adequate hospital provision for consumptives coming under the provisions of this act, shall be held to be satisfactory compliance with the provisions of this act for such counties, sections of counties, or for such cities or classes of individuals, as the case may be, as are designated in the contract; and such contracts shall, subject to the approval of the State department of health, be renewable upon such terms as shall be satisfactory to the contracting parties: *Provided, however,* That if such contracts are not renewed and approved by the State department of health at least nine months before their expiration, or if the contracts are renewed and the State department of health shall refuse approval on the ground that by reason of changed circumstances the contract will be inadequate properly to protect the public health of the communities affected by it, and the contracting parties fail within six months before the time when the previous contract expires to agree to a renewal of the contract upon terms approved by the State department of health, the duties and obligations relative to supplying adequate hospital care for such counties, or sections of counties, cities, or classes of individuals imposed upon county commissioners and city governments by this act shall be in full force and effect.

SEC. 3. "Adequate" hospital provision for consumptives within the meaning of this act shall be held to mean at least one such hospital bed for each two deaths from consumption in the county, counties, parts of a county, or cities served by such hospitals, as the case may be, as determined by computing the average number of deaths from consumption per annum for the years 1911 to 1915, inclusive, in the communities served by such hospitals, and by a similar quinquennial computation by the State department of health thereafter.

SEC. 4. Cities having more than 50,000 inhabitants within the meaning of this act, and also cities and towns having less than 50,000 inhabitants within the meaning of this act but already possessing and continuing to furnish adequate tuberculosis hospital provision according to section 3, shall be exempt from the provisions of this act and shall not be required to pay any part of the county tax which is assessed in order to comply with the provisions of this act.

SEC. 5. County commissioners are authorized and directed, subject to the approval of the State department of health, to erect one or more hospitals within their respective counties to carry out the provisions of this act, or they may in the case of counties having a total population of less than 50,000 inhabitants, as determined by the latest United States census, arrange to obtain tuberculosis hospital care for those consumptives coming within their jurisdiction by entering into a contract with a tuberculosis institution in a neighboring county in accordance with the provisions of section 2. No new tuberculosis hospital shall be erected under the provisions of this act having a total capacity of less than 50 beds.

SEC. 6. County commissioners are authorized and directed in carrying out the provisions of this act, to raise and expend such sums of money for acquiring land and constructing and equipping hospitals, and for the purchase, alteration, and enlargement of existing buildings, as may be necessary to carry out the provisions of this act. They are authorized to borrow on the credit of the county the said sums of money, and to issue the notes of the county therefor, with interest at a rate not exceeding 5 per cent per annum, payable semiannually. The notes shall be signed by the county treasurer and countersigned by a majority of the county commissioners. The county may sell the said securities at public or private sale on such terms or conditions as may be deemed proper, but the proceeds shall be used only for the purposes specified by this act. Said notes may be renewed from time to time until such time as all the cities and towns liable have paid to the county treasurer the amounts assessed. All reimbursement from cities and towns shall be applied to the payment of temporary debt incurred under the provisions of this act by said counties.

SEC. 7. When the hospital is completed and equipped, the county commissioners shall determine the cost of the same, together with the interest paid or due on the bonds or notes issued therefor, and shall apportion the same to the several cities and towns that are liable under this act, in accordance with their valuation used in assessing the county taxes. And each of the cities and towns liable under this act to contribute to the construction and equipment of said hospital shall pay its proportion of said expenses into the treasury of the county in such manner and in such installments as the county commissioners shall, by a special order, direct; and if any city or town shall neglect or refuse to pay its proportion as required by said order, the county commissioners shall, after notice to the city or town, and unless sufficient cause is shown to the contrary, issue a warrant against the city or town for the sum which it was ordered to pay, with interest and the costs of the notice and warrant; and the same shall be collected and paid into the county treasury, to be applied in payment of the expenses aforesaid.

SEC. 8. Any city or town upon which any part of the expense of construction of said hospital shall have been assessed or apportioned by the county commissioners may incur indebtedness, and may issue bonds or other securities for the payment of their respective assessments, outside of their statutory debt limit. Such bonds or

other securities shall be issued upon the serial plan, in accordance with the provisions of chapter 719 of the acts of the year 1913, so far as they apply, and shall be payable within 20 years after their respective dates of issue.

SEC. 9. The county shall provide for the care, maintenance, and repair of said hospital. In January of each year the county commissioners shall apportion the cost of the same for the previous year to the cities and towns liable under this act, in the same proportion in which the cost of the construction was assessed, and shall issue their warrant against the cities and towns for the amount or percentage for which the cities and towns are severally assessed to pay for the maintenance, care, and repair of said hospital. The county may, 30 days after a demand in writing for payment, recover in an action of contract against any city or town liable to pay any part of the cost of construction, maintenance, or repair of said hospital, the amount for which the same may be liable.

SEC. 10. For the purpose of carrying out the provisions of this act county commissioners may purchase or lease, or take by right of eminent domain, such land, not exceeding 500 acres in extent, as they may deem necessary or convenient. Damages for the taking of land or for the doing of any other act under authority hereof may be recovered in the manner provided by law for the recovery of damages in the case of land taken for highways. If land is taken by right of eminent domain, the county commissioners shall file in the registry of deeds for the district where the land is situated, a plan and description of the land taken sufficiently accurate for identification, whereupon title to the land shall vest in the county, to be held for said hospital district.

SEC. 11. The county commissioners shall be trustees of the hospitals erected under the provisions of this act; shall make suitable regulations for their government; and shall appoint superintendents and such other officers and employees as may be necessary for the proper conduct of such hospitals. The superintendents and other physicians employed shall be appointed subject to the approval of the trustees of hospitals for consumptives.

SEC. 12. Patients shall be admitted to the said hospitals through application by the boards or departments of health of the cities and towns served by the hospitals. The charges for the support of patients shall be based on the actual cost of their care and treatment, exclusive of all interest or other expenses pertaining to the construction, equipment, or permanent upkeep of the institution, which expenses shall be a charge against the county, as provided in section 6. Patients may be admitted who pay for their care in whole or in part, on terms fixed by the trustees, or for whom such payment in whole or in part is made by others; but all patients shall be admitted in the order of their application, and no preference shall be given to paying patients over others. The charge for the support of the patient in any hospital established hereunder shall be paid by the city or town by which he is sent to the hospital, so far as the same or any part thereof is not paid by the patient, or in his behalf, as aforesaid. If the patient has no known settlement in the Commonwealth, the charge shall be paid by the Commonwealth upon the approval of the bills by the State board of charity in the same manner as provided by chapter 380 of the acts of the year 1909. Such charges may afterwards be recovered by the city or town or by the treasurer of the Commonwealth, as the case may be, from the patient if he is able to pay, or from any person or kindred bound by law to maintain him, in the manner now provided by section 10 of chapter 474 of the acts of the year 1907, as amended by chapter 17 of the acts of the year 1912, for the recovery of unpaid charges for the support of inmates of the State sanatoria. All cities and towns paying for the support of patients an amount exceeding 50 per cent of the actual cost of maintaining them in hospitals erected, or utilized by contract, under the provisions of this act shall be entitled to any payment or repayments allowed under the laws of the Commonwealth in the same manner and subject

to the same conditions which now apply to the support of tuberculosis patients in a city or town tuberculosis hospital.

SEC. 13. The situation, plans for construction and actual construction of any new hospitals or additions to any existing hospitals, provided for the purpose of carrying out the provisions of this act, shall be subject to the approval of the State department of health. The State department of health, for each hospital maintained by counties under the provisions of this act, and for each hospital caring under contract with county commissioners for tuberculosis patients, shall annually in January appoint from the inhabitants of the cities or towns served by the aforesaid hospitals an unpaid board of five official visitors, of whom two shall be women, whose duty it shall be to visit the said hospitals from time to time and to make such suggestions and recommendations relative to the improvement of their management, and to the efficient and humane care of patients, as they may deem proper, jointly to the county commissioners and the State district health officer within whose jurisdiction the institution is situated.

SEC. 14. The mayors of the cities of Chelsea and Revere and the chairman of the board of selectmen of the town of Winthrop shall have and exercise, for the purposes of this act, the powers given to county commissioners, and they are hereby designated as a board of trustees for the tuberculosis hospital district comprising the cities of Chelsea and Revere and the town of Winthrop, and they are hereby authorized and directed to provide adequate hospital care for persons residing in the cities of Chelsea and Revere and the town of Winthrop suffering from consumption who are in need of such hospital care in the same manner as county commissioners are directed in section 1.

SEC. 15. Nothing in this act shall be construed to repeal chapter 527 of the acts of the year 1913, or chapter 153 of the General Acts of the year 1915, or section 35 of chapter 75 of the Revised Laws and the amendments thereof, in so far as the said acts pertain to cities having a population of 50,000 or more inhabitants within the meaning of this act, or in so far as such acts pertain to the care of diseases other than consumption or to the inspection of institutions by the State district health officers; but so much of the said acts as requires cities and towns having less than 50,000 population to make hospital provisions for tuberculosis patients is hereby repealed.

Commission on Social Insurance—Required to Study Effects of Sickness, Unemployment, and Old Age—State Department of Health to Cooperate. (Ch. 157, Resolve June 1, 1916.)

Resolved, That a special commission, to be composed of two members of the senate to be appointed by the president, four members of the house of representatives to be appointed by the speaker, and three other persons to be appointed by the governor, shall sit during the recess of the general court, and shall be known as the commission on social insurance. It shall be the duty of the said commission to study the effects of sickness, unemployment, and old age in Massachusetts, to collect facts as to actual experience with the several forms of insurance therefor, and to recommend to the general court such legislation as it may deem practical and expedient to protect the wage earners of the Commonwealth from the burdens of sickness, unemployment, and old age, or any one or more of these. The State department of health and the bureau of statistics are authorized and directed to cooperate with the commission in every way feasible in carrying out the purpose of this resolve, and in case either or both of said departments shall undertake investigations deemed necessary by the commission, they shall be allowed for their necessary expenses, outside their regular appropriations, such sums as shall be approved by the governor and council.

The commission shall report to the next general court with drafts of such laws as it may recommend, and it shall file its report with the clerk of the senate or with the clerk of the house not later than the first Wednesday in January.

The commission shall have a room in the State house assigned for its use, shall give such public hearings as it may deem necessary, may employ such assistance, clerical or otherwise, as it may require, and shall receive such sums for clerical assistance, travel, and other expenses, and for the compensation of its members, as shall be allowed by the governor and council.

Commission on Social Insurance—Study of Reasonable Restrictions in Hours of Labor in Certain Industries. (Ch. 164, Resolve June 2, 1916.)

Resolved, That the special recess commission on social insurance established by chapter 157 of the resolves of the year 1916, in addition to the matters already referred to said commission, shall study and investigate the subject of reasonable restrictions in the hours of labor in industries operated continuously for 24 hours, and shall include in its report to the next general court such recommendations, with drafts of proposed legislation, as it may deem practical and expedient. All the provisions of said chapter shall, so far as pertinent, apply to the investigation herein authorized.

NEW JERSEY.

Tuberculosis—Employment of Nurses by Counties. (Ch. 32, Act Mar. 8, 1916.)

1. The board of chosen freeholders of any county shall have power from time to time to employ a registered nurse or nurses whose duties under rules and regulations from time to time to be prescribed by such board of chosen freeholders shall be as follows: To discover and investigate any tuberculosis cases existing in such county; to give instructions to tuberculosis patients and others in such county relative to hygienic or sanitary measures to be observed in preventing the spread of such disease; to act as visiting nurse to any tuberculosis patients in such county; to aid in making a report of existing or suspected cases of tuberculosis in such county to the State board of health, to the board of managers of any hospital established in or for such county for the care and treatment of persons suffering from tuberculosis, and to the board of health of any municipality in such county, and to perform such other duties as nurse or hygienic expert as may be designated by such county board of freeholders to prevent the spread of such disease.

2. Every nurse so employed shall at the end of each month, and at such other times as the board of chosen freeholders of any such county may require, make a report in writing to such board, which report shall show in detail the visits made during such month, the services performed, and such other information as the board of chosen freeholders may from time to time require.

3. Any nurse or nurses so employed by any such board of chosen freeholders shall receive for his or her services such compensation as may be provided by said board and shall be subject to the jurisdiction and direction of such board.

4. Nothing in this act shall repeal or in anywise affect an act¹ entitled "An act concerning tuberculosis," approved March 28, 1912; and this act shall not apply to any county of the first class where nurses have been, or may be, appointed to perform the duties mentioned in paragraph 1 by the board of managers serving under the provisions of an act entitled "An act concerning tuberculosis," approved March 28, 1912.

Tuberculosis—Maintenance of Indigent Patients. (Ch. 214, Act Mar. 18, 1916.)

1. Paragraph 13 of an act¹ entitled "An act concerning tuberculosis," approved March 28, 1912, be and the same is hereby amended to read as follows:

"13. There shall be paid by the State treasurer each year to each county which maintains tubercular patients, either in the county hospital or in a hospital of a municipality or an incorporated society under contract between such county and such municipality

¹ Reprint No. 200 from the Public Health Reports, p. 136.

or incorporated society the sum of \$3 per week for each person maintained in such institutions by such county during the time of such confinement, excepting for those patients paying full maintenance."

Nurses—Employment of, by Municipalities. (Ch. 202, Act Mar. 18, 1916.)

1. It shall and may be lawful for the governing body of any municipality in this State to employ one or more nurses for the purpose of taking care of the needy sick in said municipality, said nurse or nurses when employed to be paid such compensation as the governing body may by resolution determine; the compensation of any such nurse or nurses shall be paid out of any moneys in the treasury of said municipality upon proper warrant, or if there be no money for that purpose the treasurer or collector of said municipality, upon the certification to him of the amount of money necessary to pay any such nurse or nurses, is hereby authorized to borrow the said sum of money upon the promissory note of said municipality, signed by said treasurer or collector.

2. It shall be lawful for any such municipality to permanently employ one or more nurses as provided for in the first section of this act and to fix their compensation; and such nurse or nurses when employed shall not be removed from their position except upon complaint and charges preferred, and an opportunity to be heard before the said governing body of said municipality.

3. Any two municipalities of this State may join for the purpose of carrying out the provisions of this act, and when the said two municipalities shall, by resolution of their governing bodies, authorize the appointment of a nurse and fix the salary of said nurse, the amount of such salary shall be contributed in equal parts by the said municipalities, as provided for in this act. In case two municipalities shall join in the appointment of a nurse, the duties to be performed by said nurse shall be assigned and designated by the mayors or head officials of said governing bodies.

Local Boards of Health—Required to Make Annual Reports to the State Director of Health. (Ch. 90, Act Mar. 16, 1916.)

1. Section 37 of the act to which this act is amendatory be, and the same is hereby, amended so it shall read as follows:

"37. That the local board of health of every township, city, borough, town, and other municipality shall, on or before the 1st day of February in each year, in addition to other reports required, prepare an annual report for the preceding calendar year of the condition of the public health within the limits of its jurisdiction, stating therein any special cause for the deterioration of health or of hazard thereto, and shall therein answer any questions which may have been addressed to such local board of health by the State director of health, and such local board shall forward a copy of such report to the State director of health, on or before the 15th day of February in each year; the person performing the clerical work required in the preparation of such annual report shall, upon receiving a certificate from the State director of health that such annual report has been duly prepared and received by said State director of health, on or before the said 15th day of February, shall be entitled to receive from the proper disbursing officer of the township, city, borough, town or other municipality for which the report is made the sum of \$2 for such clerical services."

Health Inspectors—Exempt from Wearing Uniforms when They are Physicians and also Licensed Health Officers. (Ch. 255, Act Mar. 22, 1916.)

1. In cities of the second class where a sanitary inspector or a food and drug inspector is required to wear a uniform, such person or persons shall be exempt provided he is a regularly licensed and registered physician and surgeon, and also holds a license as health officer granted by the New Jersey State Board of Health.

Foodstuffs—Cold Storage—Regulation of. (Ch. 101, Act Mar. 16, 1916.)

1. For the purpose of this act, "cold storage" shall mean the storage or keeping of articles of food, at or below a temperature above zero, of 45° Fahrenheit, in a cold-storage warehouse; "cold-storage warehouse" shall mean any place artificially cooled to or below a temperature above zero, of 45° Fahrenheit, in which articles of food are placed or held for 30 days or more; "articles of food" shall mean fresh meat and fresh-meat products, except in process of manufacture, and all fish, game, poultry, eggs, milk, and milk products, and edible fats and oils.

The terms "article of food" and "articles of food" as used in this act shall be construed to mean and include fresh meat and fresh-meat products, except in process of manufacture, fresh food fish, game, poultry, eggs, milk, and milk products and edible fats and oils.

2. Any person, firm, or corporation desiring to operate or to continue to operate a cold-storage warehouse shall make application in writing to the State director of health for that purpose, stating the location of his plant or plants. On receipt of the application the State director of health shall cause an examination to be made into the sanitary condition of said plant or plants, and, if found by him to be in a sanitary condition and otherwise properly equipped for the business of a cold-storage warehouse, he shall cause a license to be issued authorizing the applicant to operate such cold storage warehouse or warehouses for and during the period of one year. The license shall be issued upon payment by the applicant of a license fee of \$10 to the State department of health for each such warehouse.

3. In case any cold-storage warehouse, or any part thereof, covered by a license under the provisions of this act shall at any time be deemed by the State director of health to be in an insanitary condition, it shall be his duty to notify the licensee of such condition, and upon the failure of the licensee to put such cold-storage warehouse, or the specified part thereof, in a sanitary condition within a time to be designated by him, it shall be the duty of the State director of health to prohibit the use under his license of such cold-storage warehouse, or part thereof, as he deems in an insanitary condition until such time as it may be put in a sanitary condition.

4. It shall be the duty of any person, firm, or corporation licensed to operate a cold-storage warehouse to keep an accurate record of the receipts and the withdrawals of the articles of food, and the State director of health and all chemists, inspectors, and employees of the State department of health shall have free access to those records at any time. Every such person, firm, or corporation shall, furthermore, submit a monthly report to the State director of health, setting forth in itemized particulars the quantity of articles of food products held in cold-storage warehouse. Such monthly reports shall be filed on or before the 5th day of the following month, and the reports so rendered shall show the conditions existing on the last day of the month reported, and a summary of such reports shall be prepared by the director of health and shall be open to public inspection on or before the 10th day of each month.

5. It shall be the duty of the State director of health to inspect and supervise all cold-storage warehouses in the State and to make such inspection of the entry of articles of food therein as he may deem necessary to secure the proper enforcement of this act. The State director of health and all chemists, inspectors, and employees of the State department of health shall be permitted access to such cold-storage warehouses, and all parts thereof, at all reasonable times for purposes of inspection and enforcement of the provisions of this act. The State director of health may also appoint and designate such person or persons as he deems qualified to make the inspection herein required.

6. No article of food intended for human consumption shall be placed, received, or kept in any cold-storage warehouse if apparently diseased, tainted, or so deteriorated in any other way as to injure its keeping. Any article of food, if intended for use

other than human consumption, shall be marked by the owner before being placed, received, or kept in any cold-storage warehouse in accordance with the forms prescribed or to be prescribed by the State director of health, under authority hereinafter conferred, in such a way as to plainly indicate the fact that such article is not to be sold for human food.

7. No person, firm, or corporation shall place or store in any cold-storage warehouse in this State articles of food as herein defined unless the same shall be plainly marked, stamped, or tagged, either upon the container in which they are packed or upon the article of food itself, with the date when placed therein.

No person, firm, or corporation shall remove such articles of food from any cold-storage warehouse unless the same shall be plainly marked, stamped, or tagged, either on the container in which it is inclosed or upon the article of food itself, with the date when it is removed from such cold-storage warehouse.

8. No person, firm, or corporation shall keep in any cold-storage warehouse any article of food for a longer period than 12 calendar months, except with the consent of the State director of health, as hereinafter provided. The State director of health shall, upon application during the twelfth month, extend the period of storage beyond 12 months for any particular articles of food, provided the same are found upon examination to be in proper condition for further storage. The length of time for which further storage is allowed shall be specified in the order granting the permission. A report on each case in which such extension of storage shall be permitted, including information relating to the reason for the action of the State director of health, the kind and amount of articles of food for which the storage period was extended, and the length of time for which the continuance was granted, shall be included in the annual report of the State director of health.

9. It shall be unlawful to sell, or to offer or expose for sale, articles of food which have been held in any cold-storage warehouse for a period of 30 days or over without notifying persons purchasing or intending to purchase the same that they have been so kept by the display of a placard conspicuously marked "cold-storage goods," on the bulk mass or articles of food, and it shall be unlawful to represent or advertise as fresh articles of food which have been held in any cold-storage warehouse for a period of 30 days or over.

10. It shall be unlawful to return to any cold-storage warehouse any article of food which has once been released from such storage and placed on the market for sale to consumers, but nothing in this section shall be construed to prevent the transfer of goods from one cold-storage warehouse to another, provided that all prior stamping, marking, and tagging shall remain thereon, and that such transfer is not made for the purpose of evading any provision of this act.

11. The State director of health may make all necessary rules and regulations to carry into effect the provisions of this act.

12. Any person who shall violate any of the provisions of section 9 of this act shall be liable to a penalty of not less than \$10 nor more than \$50 for the first offense, and to a penalty of not less than \$50 nor more than \$100 for the second offense, and to a penalty of \$200 for the third and each subsequent offense. Any person who shall violate any of the provisions of this act except the provisions of section 9 shall be liable to a penalty of \$100 for the first offense and to a penalty of \$200 for the second offense and to a penalty of \$500 for the third and each subsequent offense.

13. Any and all penalties prescribed by section 2 [sic] of this act shall be recovered in an action of debt by and in the name of the department of health of the State of New Jersey, or by and in the name of any board of health of any municipality of this State, as the case may be, as plaintiff. The pleadings shall conform in all respects to the practice prevailing in the court in which any such action shall be instituted, but no pleading or process shall be set aside or invalidated by reason of any formal or

technical defects therein if the same contain a statement of the nature of the alleged violation and of the section of this act alleged to have been violated, and upon the attention of the court being called to any such formal or technical defect the same shall be immediately corrected and the said pleading or process amended as a matter of course, and as to all other defects in pleadings or process the same may be amended, in the discretion of the court, as in any other action or proceedings in said court.

14. When judgment shall be rendered against any defendant other than a body corporate, execution shall be issued against his goods and chattels and body without any order of the court for that purpose first had and obtained. If the officer executing any such writ shall be unable to find sufficient goods and chattels of said defendant in his bailiwick to make the amount of said judgment, he shall take the body of the said defendant and deliver him to the keeper of the common jail of said county, there to be detained until discharged by the court in which such judgment was obtained, or by one of the justices of the supreme court, when such court or justice shall be satisfied that further confinement will not result in the payment of the judgment and costs. In case judgment shall be rendered against a body corporate, execution shall be issued against the goods and chattels of such body corporate as in other actions of debt.

15. Any penalty recovered in any action brought under the provisions of this act shall be paid to the plaintiff therein. When such plaintiff is the State department of health, such penalty shall be paid by such department into the treasury of this State. When such plaintiff is a local board of health, such penalty shall be paid by such local board into the treasury of the township, city, borough, town, or other local municipal government within which such local board has jurisdiction.

16. The provisions of this act shall not apply to ice boxes or refrigerators maintained by wholesale or retail grocers.

17. This act shall take effect July 1, 1916.

Burial—Vaults and Mausoleums—Construction and Maintenance. (Ch. 233, Act Mar. 21, 1916.)

1. After the passage of this act no person, firm, or corporation shall build, construct, or erect any public mausoleum, vault, crypt, or structure intended to hold or contain the bodies of the dead, which shall be wholly or partially above the surface of the ground, without the consent and approval of the board of health, or if there be no board of health, then the health officer of the city, township, town, borough, or other municipality in which it is proposed to build or erect such structure, such consent to be obtained upon application in writing for that purpose made; and in case of refusal of the said local board of health or health officer to grant the same, then the person, firm, or corporation making application as aforesaid may, within 30 days after such refusal or failure to act, apply to the State board of health, which shall have power to reverse the decision of the local authorities and grant the application; and in case the local authorities grant permission to build or erect said structure, and the same shall be deemed objectionable by the inhabitants of the city, town, township, borough, or other municipality wherein it is proposed to locate the same, then 10 citizen freeholders thereof may, within 30 days after the granting of such permit, apply to the State board of health, which State board shall fix a time and place at which to hear, in a summary manner, the objections to the same, and after such hearing shall have power to reverse the decision of the local authorities and prohibit the erection of such structure or may affirm the decision of the local authorities.

2. Before commencing the building, construction, or erection of the same, full detailed plans and specifications of such structure shall be presented to the State board of health of this State for the examination and approval of said board. Before approving such plans and specifications said board of health shall be satisfied as to the

following facts: (a) That the same provide for a structure so arranged that each and every part thereof may be readily examined at any time during construction by the members of such board, or by the health officer of any county or city wherein such structure may be erected; (b) that proper provision is made for hermetically and permanently sealing each individual crypt or cell after the placing of the deceased body therein in such a way that no injurious or offensive odor or effluvia may escape therefrom into the interior of the building or vestibule; (c) that the materials of which it is intended to construct the same shall be of the best quality obtainable, and either natural stone or United States standard bronze with the exception of the crypts and foundations. The front exterior walls to be not less than 6 inches thick and of natural stone, granite, or marble, of the character best suited for the respective purposes for which they are intended, and so arranged with concrete or other material that all exterior walls shall be at least 18 inches in thickness. The approval of the said plans and specifications by the said board shall be evidenced by a certificate in writing properly signed, and such signed approval, together with the detailed plans and specifications so approved, shall, before commencing work on such structure, be filed in the office of the clerk of the county and State wherein such structure is to be erected, and there remain as a public record.

3. The process of erection of such structure, mausoleum, or crypt shall be at all times under the supervision of the local board of health or health officer. It shall be the duty of such local board of health or health officer to see that the approved specifications are complied with in every particular as to kind, quality, character, and quantity of each and every material, respectively, and otherwise. No departure or deviation from the original plans and specifications shall be permitted except upon approval of the State board of health, evidenced and filed in like manner and form as the approval of the original plans and specifications.

4. No mausoleum, vault, crypt, or structure so erected as aforesaid shall be used for the purpose of interring or depositing therein any dead body until there shall have been obtained from the State board of health a final certificate properly signed, or a certificate signed by a majority of the local board of health or the health officer, stating that the plans and specifications as filed have been complied with and followed in every particular, nor until such certificate shall be filed with the county clerk as aforesaid.

5. No mausoleum, vault, crypt, or structure so erected as aforesaid shall be used for the purpose of interring or depositing therein any dead body until a trust fund shall have been established and set apart, in accordance with the laws regulating trust funds in this State, amounting to not less than 10 per cent of the total cost of the structure; the interest, and that only, to be used for the perpetuation of said building; but this clause shall not apply to private mausoleums or temporary receiving vaults.

6. All mausoleums, vaults, crypts, or structures intended to hold or contain the bodies of the dead, now erected or which may hereafter be erected, and located within any duly authorized cemetery organized in accordance with the laws of the State of New Jersey, shall be exempt from taxation in like manner as such cemeteries are now exempt by law.

7. Any person, any member of a firm, or any officer or director of a corporation which or who shall fail to comply with each and every provision of this act shall be personally liable therefor, and shall, upon conviction thereof, be deemed guilty of a misdemeanor and punished accordingly: *Provided, however,* That the provisions of sections 1, 2, 3, 4, and 5 of this act shall not apply to any mausoleum, crypt, vault, or structure intended to hold or contain the bodies of the dead which shall have been erected or is now in the course of erection.

Cemeteries—Acquisition of, by Cities—Local Boards of Health Authorized to Initiate Proceedings. (Ch. 251, Act Mar. 22, 1916.)

1. Wherever there exists in any city of this State a burying ground or cemetery, owned and controlled by any church or other corporation, which church or corporation is unable to properly care for the same, and by reason thereof the said burying ground or cemetery has become a public nuisance, the said church or other corporation may apply to the board having charge or control of the finances in such city to take possession of the said burying ground or cemetery and may convey to said city its interest in the whole or any part thereof.

2. Wherever there exists in any city of this State any burying ground or cemetery, owned or controlled by a church or other corporation, which has neglected to care for the same, so that in the opinion of the board of health of such city the said burying ground or cemetery has become a detriment to public health or to the morals of the community, the said board of health may apply to the board or body having charge or control of the finances of said city to take possession of said burying ground or cemetery.

3. Upon receiving such request from such corporation or such board of health, the board or body having charge or control of the finances of such city shall investigate whether or not the said cemetery is so located that it is inconvenient to care for the same properly, and whether or not it is for the best interest of the people of the city where the same is located that the bodies interred therein should be removed and re-interred in a more suitable place, and such old burying ground or cemetery converted into a park or devoted to other public uses or purposes.

4. If such board or body having charge or control of the finances of such city should determine for the reasons aforesaid that the bodies aforesaid should be removed from any such old burying ground or cemetery, and the same converted into a park, or devoted to other public uses or purposes, it shall be lawful for it to accept on behalf of the city from such church or other corporation a deed of conveyance of the said burying ground or cemetery, and to cause possession thereof to be taken on behalf of the city.

5. In case the application is made by the board of health as provided in section 2, and the church or other corporation controlling such burying ground or cemetery shall refuse or neglect to execute such deed, or is unable to convey the whole or any part of such burying ground or cemetery to such city by reason of having conveyed lots or plots or some interest therein to private persons, then it shall be lawful for the said board or body having charge or control of the finances of such city to apply by petition to the circuit court of the county wherein such city is located, setting forth that the said burying ground or cemetery has become a nuisance, or is a detriment to the health or morals of the people of such city, for an order permitting said city to take possession of said burying ground or cemetery and to cause the bodies in said burying ground or cemetery to be disinterred and to be removed to some suitable place either within or without the limits of said municipality.

6. Upon receiving such petition, the said circuit court shall fix a day for the hearing upon said petition and shall order said municipality to give such notice of said hearing as said court may designate.

7. Upon the return day of such notice, or upon a day to which the said hearing may be adjourned, the said court upon hearing all parties interested, who may desire to be heard, if the said petition is well founded and true, may adjudge that the said burying ground or cemetery has become a public nuisance or is a detriment to the health or morals of the people of said city, and that the bodies therein should be disinterred and removed to a more suitable place.

8. Upon the execution of the deed referred to in section 4, or upon the making of the order referred to in section 7, it shall be lawful for the said board or body having charge or control of the finances to cause the bodies buried in said burying ground or

cemetery to be disinterred and to be removed and reburied in another cemetery or in some other suitable place, and for that purpose it may enter into a contract with any cemetery company or church organization owning or controlling any cemetery or with any other person to take up and remove the said bodies and to inter the same in any other cemetery or suitable place, and to remove from such abandoned burying ground or cemeteries any headstones or markers and replace the same over the proper bodies in the new place of interment and to provide for the proper care of such new place of interment. The said board or body having control of the finances shall cause records and maps to be prepared and filed in the office of the city clerk, on which shall be recorded, as nearly as can be ascertained, the names of all bodies disinterred and the lots or plots from which they were taken in any such old burying ground or cemetery, and the cemetery or place to which they have been taken, and the lots or plots in which they may be reinterred.

9. After the completion of the removal of said bodies the said city by any board or body therein may by authority of the board or body having charge or control of the finances of said city enter upon and take possession of the said abandoned cemetery and devote the same to any public use or purpose.

10. In case of the neglect or refusal or inability of such church or other corporation to convey such burying ground or cemetery to such city, and after the making of the order referred to in section 7 hereof, the board or body having charge or control shall then apply to the circuit court of the county wherein such municipality is located for the appointment of three commissioners to appraise the value of the said burying ground or cemetery and the rights of any person owning any lot or plot therein. Upon the appointment of the said three commissioners they shall give notice in such manner as such court may designate to all persons claiming any interest in the said premises to present their claims to the said commission, who shall give a public hearing to all persons interested who may present themselves. The said commission shall appraise the value of each separate lot or plot and other land included within said burying ground or cemetery.

11. The said commission shall further ascertain the cost of the removal of the bodies from each of said lots and the cost of securing the new site and the cost of such disinterment and reinterment, and this cost shall be a first lien against the value of the lots or plots in the abandoned cemetery as appraised, and the said city shall pay to the owners of each lot or plot the difference, if any, between the value of the lots in the abandoned cemetery as appraised and the cost of removing the said bodies and reintering them in a new cemetery.

12. The said commission shall report to said circuit court the appraised value of each of said lots or plots and other lands within said burying ground or cemetery, and the amounts charged against each of said lots or plots for the removal of said bodies and the reinterment thereof, which report may be confirmed or corrected by said court, which shall fix a day and place for the hearing of objections thereto, and shall give public notice thereof by such advertisement as it shall think proper.

13. In case the owner of any lot or plot or other lands within said burying ground or cemetery shall feel aggrieved by the report of said commissioners he may appeal therefrom to said circuit court by serving upon the city clerk of such city, within 10 days after the confirmation of such report, a notice stating such appeal, and thereafter the proceedings upon said appeal shall be in the manner provided for appeals from the report of commissioners in an act entitled "An act to regulate the ascertainment and payment of compensation for property condemned or taken for public use (revision of 1900)," approved March 20, 1900.

14. The board or body having charge or control of the finances of such city may from time to time borrow the money necessary for the acquisition of said burying grounds or cemeteries as aforesaid and the disinterment of the bodies and the reinterment of the same and all expenses connected therewith, and issue temporary obligations

therefor, and after the entire cost thereof has been ascertained may issue interest-bearing bonds of the said municipality to take up such temporary obligations.

Domestic Animals—Communicable Diseases—Powers and Duties Vested in State Board of Health Relative thereto Transferred to State Department of Agriculture.
(Ch. 269, Laws of 1916.)

The department of health of the State of New Jersey announces that "in accordance with the provisions of chapter 269 of the Laws of 1916 all powers and duties heretofore vested in the State board of health in relation to contagious diseases of animals have been transferred to the State department of agriculture. This act takes effect July 1, 1916."

Sewers—Construction, Operation, and Maintenance of, Jointly by Municipalities.
(Ch. 207, Act Mar. 18, 1916.)

1. It shall be lawful for any two or more municipalities in this State, without regard to the form of their incorporation, to contract with one another for the construction, maintenance, and operation of a sewer or sewers to be used jointly by such municipalities for the conveying of the sewage of such municipalities to some outlet in such contract to be designated, and to modify any already existing agreement for the conveying of such sewage or any part thereof, and to agree in such contract for the future extension, enlargement, and alteration of such sewer or sewers and for the future construction, maintenance, and operation as necessity shall arise, according to the terms of such contract, or other and additional sewers of such kind and character as shall be deemed proper and as shall be fixed by said contract to provide for the conveying of all or that part of the sewage of such municipalities as by said contract it shall be agreed upon shall be conveyed through such sewer or sewers. Such contract shall provide for the respective shares of the cost of present and future construction and of the maintenance and operation of such sewer or sewers to be borne by the respective municipalities parties thereto, and may provide that the share in such cost of any one or more municipalities may be paid in whole or in part into the treasury of any other contracting municipality for the purposes of such contract, and may provide that the whole or any part of the work provided for in such contract may be done by any one or more of such municipalities for the benefit of all of the municipalities parties thereto.

2. Each of the municipalities so contracting shall have power to provide for the expense of such contract by borrowing the necessary moneys therefor either upon temporary loan bonds or by permanent bonds of the municipality. If such temporary loan bonds are issued, the same may be renewed from time to time, and permanent loan bonds may be issued at their maturity or at the maturity of any renewal thereof to provide for the payment of such temporary loan bonds. The permanent bonds shall bear interest at a rate not to exceed 5 per cent per annum and shall run for a period not to exceed 30 years, and shall either provide that a certain portion of them shall mature in each year, in which event sufficient moneys shall be raised through the tax ordinance to pay for the bonds maturing in each year, or shall contain a sinking-fund provision sufficient to pay all of said bonds at maturity.

3. The issuance of bonds as hereinabove provided shall not be held to exhaust the power of the contracting municipalities to issue, under the provisions of this act, other and further bonds for the purpose of defraying further expenses provided for in such contract between the municipalities at such times as the terms of said contract shall involve the municipalities in further expense.

Blindness—Commission to Investigate Causes of, and to Adopt and Enforce Preventive Measures—State Board of Health to Cooperate. (Ch. 22, Act Mar. 7, 1916.)

1. The commission for ameliorating the condition of the blind, constituted and appointed pursuant to the provisions of the act to which this act is a supplement, are hereby authorized and empowered to make inquiries concerning the causes of blindness, to learn what proportion of the causes of blindness of inhabitants of this State are preventable, and to cooperate with the State board of health and other board, body or official of this State which may be interested in the subject matter of this act, in adopting and enforcing proper and preventive measures. The said commission may expend such sums of money for the purpose of carrying out the provisions of this act as may be appropriated by any annual or supplemental appropriation bill, which said sum, when so appropriated, or any part thereof, shall be paid out of the treasury of this State, on bills duly approved by the commission for ameliorating the condition of the blind of this State.

Nuisances—Prohibition of. (Reg. Dept. of H., May 2, 1916.)

REGULATION 1. No person or private or municipal corporation shall maintain or permit to be maintained anything whatsoever which is a hazard or a danger to human health.

REG. 2. No person or private or municipal corporation shall maintain any well, or other supply of water used for drinking or household purposes, which is polluted in any manner that may render such water injurious to health, or which is so situated or constructed that it may become so polluted.

REG. 3. No person or private or municipal corporation shall maintain, use or permit to be used, any privy or other receptacle for human excrement, unless such privy or other receptacle is so constructed and maintained that flies can not gain access to the excremental matter contained therein, and unless such excremental matter shall at all times be prevented from flowing over or upon the surface of the ground. Every privy or other receptacle for human excrement located within 100 feet of any stream, the waters of which are used for drinking or domestic purposes, shall be provided with a water-tight vault.

REG. 4. No person or private or municipal corporation shall permit any human excrement, or material containing human excrement, to remain on the surface of the ground; nor shall such excremental matter or material containing such excremental matter be buried or otherwise disposed of within 100 feet of any stream, well, lake, spring or other source of water used for drinking or domestic purposes; nor shall any such material be deposited in any place where it is likely to gain access to such waters: *Provided, however,* That this regulation shall not apply to effluents from sewage disposal plants which have been, or hereafter may be, approved by the State department of health.

REG. 5. No person or private or municipal corporation shall maintain, or permit to be maintained, any accumulation of decomposing animal or vegetable matter in which fly larvæ exist on any premises upon which is located any hotel, boarding house, lodging house, restaurant, or any other establishment in which foods intended for sale or distribution are prepared, handled, or sold, or at any point on any other premises within 250 feet of any dwelling occupied by another.

REG. 6. No person or private or municipal corporation shall maintain or permit to be maintained, any pool, pond, ditch, stream or other body of water, or any cistern, privy vault, cesspool, rain barrel, or other receptacle containing water, in which mosquito larvæ exist.

REG. 7. These regulations shall take effect on June 1, 1916.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

INDIANAPOLIS, IND.

Milk and Milk Products—Production, Care, and Sale. (Ord. May 23, 1916.)

SECTION 1. Every person who shall bring into the city of Indianapolis for sale, or who shall, within said city, sell, prepare for sale, offer for sale, expose for sale, dispose of, exchange or deliver, or with the intent so to do as aforesaid, have in his possession, care custody, or control within said city, milk, skimmed milk, cream, buttermilk or milk prepared by a fermentation or other process, shall first make application for a permit so to do in the office of the health officer, and be granted such a permit by the board of health.

SEC. 2. Any person making such application shall file a sworn statement on a printed form provided by the board of health for that purpose, stating:

- (1) The name, residence and location of the business place or places of the applicant.
- (2) If the applicant be a firm, the name of each member of the firm and the location of the business place or places.
- (3) If the applicant be a corporation, the names of the president, secretary, and business manager or superintendent thereof, and the location of the business place or places of the corporation.
- (4) The name of the person in charge of each business place of the applicant.
- (5) The precise nature of the business to be carried on by the applicant, whether one or more of the following:

Milk vendor, when the business is to be that of selling milk, skimmed milk, cream, buttermilk, or milk prepared by a fermentation or other process, not as an incident to some other business, but as an occupation in itself.

Operator of a city milk plant, when the business is to be the conduct of a place where said dairy products are prepared for distribution to customers; this term shall not apply to those persons who prepare said articles for distribution to customers at the dairy where they are produced.

Proprietor of a store (specify what particular kind of store), when the business is to be that of selling said dairy products in a store, hotel, restaurant, saloon, ice-cream parlor, confectionery, or other place as an incident to the main business.

Operator of a pasteurizer, when the business is to be that of pasteurizing said dairy products.

- (6) The number of cows, if any, owned or controlled by the applicant, the location of the dairy and the average daily quantity of milk produced.

- (7) Where said dairy products are bought from localities outside of the city of Indianapolis or purchased from other parties within the city, a detailed statement of the localities or places from which said dairy products are bought and the names and postoffice addresses of persons supplying same, the location of the shipping or collecting station or stations, if any, and a statement of the average quantity received from each person daily.

- (8) The number and description of each and every wagon, carriage, or other vehicle used in the milk or cream business, and the number used for the delivery of milk in the retail or wholesale business, or both.

If any changes be made in the firm, officers, managers, superintendents, location, residence, nature of business, wagons, carriages, or other vehicles, or in the names or addresses of shippers or other persons supplying milk or any other matter or information required by this section, written notice thereof must forthwith be given to the health officer for insertion and correction in the records of the department.

SEC. 3. Permits shall be issued in the names of the applicants therefor. No permit shall be sold, assigned, loaned, or transferred or be placed in the care, custody, control, or possession of any person other than the one to whom it was issued. A permit shall be kept conspicuously posted at each business place of the grantee.

SEC. 4. Each permit shall run for a period of one year, unless sooner revoked, and no longer. It shall specify the nature of the business to be conducted by the grantee and its location, as set out in the application, and shall not be construed as a permit to conduct any other kind of business or elsewhere than specified.

SEC. 5. The board of health may in its discretion refuse to grant a permit to anyone who shall have been repeatedly convicted of violating the ordinances of the city of Indianapolis or laws of the State of Indiana concerning the inspection and regulation of dairies and the inspection and sale of dairy products, or when, for any reason in the interest of the health of the inhabitants of the city, it would be inadvisable to grant a permit to such applicant. The board of health may revoke any permit for the same reason for which they may refuse to issue a permit. No permit as milk vendor shall be refused by the board of health nor shall any such permit be revoked except after a due hearing upon due notice, at which the applicant or grantee shall have full opportunity to be heard under such rules and regulations as the board of health prescribes.

SEC. 6. No person shall bring into the city of Indianapolis for sale, or shall, within said city, sell or offer for sale, dispose of, exchange, or deliver, or, with the intent so to do as aforesaid, have in his possession, care, custody, or control within said city, milk which does not meet the State standard for milk fat and milk solids.

SEC. 7. Notwithstanding the provisions of section 6, milk from which a part of the cream has been removed may be lawfully sold when marked "standardized milk," providing it is not below State standard in butter fat or when sold as and for skimmed milk as provided in this section, and not otherwise; and the fact that such milk is being sold as skimmed milk shall be a defense to a prosecution under section 6 hereof and other ordinances relating to milk only when it is sold in accordance herewith.

No person shall bring into the city of Indianapolis for sale, or shall, within said city, sell or offer for sale, exchange, or deliver, or, with the intent so to do as aforesaid, have in his possession, care, custody, or control, within said city, any skimmed milk:

- (a) Containing less than $9\frac{1}{2}$ per cent, by weight, of milk solids;
- (b) Containing less than $8\frac{1}{2}$ per cent, by weight, of milk solids, not fat;
- (c) Unless all cans, vessels, or packages in which skimmed milk is carried, delivered, or sold, or from which it is sold, shall be distinctly marked in a conspicuous place above the center on the outside of each container with the words "skimmed milk" in uncondensed gothic letters not less than 1 inch in height: *Provided*, That when such vessel or package contains 1 quart or less the letters shall not be less than one-quarter inch in height.

SEC. 8. No person shall bring into the city of Indianapolis for sale, or shall, within said city, sell or offer for sale, dispose of, exchange, or deliver, or with the intent so to do as aforesaid, have in his possession, care, custody, or control, within said city, cream:

- (a) Containing less than the State standard of butter fat;
- (b) Unless obtained from milk produced, kept, and handled in accordance with the ordinance of the city of Indianapolis.

SEC. 9. No person shall bring into the city of Indianapolis for sale, or shall, within said city, sell or offer for sale, dispose of, exchange, or deliver, or, with the intent so

to do as aforesaid, have in his possession, care, custody, or control within said city, buttermilk:

- (a) Containing less than $8\frac{1}{2}$ per cent, by weight, of milk solids;
- (b) Unless it is the product that remains when fat is removed from milk or cream, sweet or sour, in the process of churning. When milk is skimmed, soured, or treated so as to resemble buttermilk it must be known by some distinctive name.

SEC. 10. No person shall bring into the city of Indianapolis for sale, or shall, within said city, sell or offer for sale, dispose of, exchange, or deliver, or, with the intent so to do as aforesaid, have in his possession, care, custody, or control, within said city, milk, skimmed milk, cream, buttermilk, or milk prepared by a fermentation or other process which is adulterated or misbranded.

1. In addition to other methods of adulteration prohibited by ordinance, any of the said dairy products shall be deemed to be adulterated:

- (a) If it have therein or contain any added substance which is poisonous or injurious to health;
- (b) If any substance or substances have been mixed with it so as to lower or depreciate or injuriously affect the strength, quality, or purity.
- (c) If any substance or substances have been substituted wholly or in part for the same.
- (d) If it is mixed or colored in a manner whereby damage or inferiority is concealed, or if by any means it is made to appear to be better or of greater value than it really is.
- (e) If it be drawn from any cows having a communicable disease or from a herd which contains any diseased cattle, or if any attendant of the herd from which it is drawn or any person employed in connection with the handling of it is affected with any communicable disease, or has been exposed to any communicable disease and continues such attendance or employment, except under such rules and regulations as the board of health may prescribe.

(f) If drawn from any cow within 15 days before or 10 days after parturition.

(g) If drawn from any cow which has been fed on garbage or other improper food.

SEC. 11. Nothing in this ordinance shall be so construed as to prohibit the bringing into the city of Indianapolis for sale or the sale of or having in the possession with intent to sell milk modified on a physician's order, milk prepared by a fermentation process, or buttermilk, provided the same is obtained, made, or compounded from milk or cream produced, kept and handled in accordance with ordinance provisions.

SEC. 12. After two months from the date of the approval of this ordinance no person shall bring into the city of Indianapolis for sale, or shall, within said city, sell or offer for sale, expose for sale, dispose of, exchange or deliver, or with the intent so to do as aforesaid have in his possession, care, custody, or control within said city any milk, skimmed milk, cream, buttermilk or milk prepared by a fermentation or other process unless such milk, skimmed milk, or cream, or the milk or cream contained in the buttermilk or milk prepared by a fermentation or other process is clarified in a centrifugal clarifier or separator meeting the approval of the health officer or board of health inspector and is pasteurized before delivery for consumption as food or used in the manufacture of ice cream or other milk products, according to the rules and regulations prescribed in this ordinance, except as provided in section 20.

SEC. 13. The Held method of pasteurization, as hereinafter provided, alone shall be used. The milk, skimmed milk or cream shall be uniformly heated to between 140° F. and 146° F. and maintained at that temperature for 30 minutes.

SEC. 14. The pasteurized product shall be cooled at once to a temperature of 45° F. or less. The cooling shall be so conducted that the pasteurized product is not exposed to contamination. All apparatus used in the clarifying, pasteurizing, and cooling shall be so constructed that it can be readily cleaned and sterilized.

SEC. 15. All pasteurizers operated for the production of pasteurized milk, skimmed milk, or cream to be sold in the city of Indianapolis shall be equipped with an apparatus regulating automatically the supply of heat so as to correspond with and produce the required temperature. The automatic thermoregulators shall be accurate and shall be approved by the health officer or board of health inspector.

A recording apparatus shall be installed upon all pasteurizers to record during operation the temperature of the pasteurized product. The thermometer of this recording apparatus must be accurate and kept immersed in the milk in such a way that it is not exposed to escaping steam or other heat except the heated milk, except where the pasteurizing is done in the final container, in which event the thermometer shall be so placed as to accurately indicate the temperature of the pasteurized product. The records made by this recording thermometer must be accurate and made on a daily chart, which shall be dated and preserved for the inspection of the health officers or board of health inspector for one year.

The automatic thermo-regulating and recording apparatus may be combined into one instrument.

SEC. 16. All containers in which pasteurized milk, skimmed milk, or cream is delivered to the consumer shall be plainly labeled "Pasteurized." The label must also bear the name of the product and the name of the dealer. Cans, bottles, or other containers shall not bear the trade name or trade-mark of any person, firm, or corporation other than the producer or distributor of the package.

SEC. 17. Pasteurized milk, skimmed milk, or cream must be delivered to the consumer within 36 hours of the pasteurization.

SEC. 18. No milk, skimmed milk, or cream shall be pasteurized a second time after having been placed in any cans, bottles, or other containers for the purpose of selling to the consumer, or placed in any cans, bottles, or other containers which have not been thoroughly washed and sterilized not less than six hours before using by live steam not less than five pounds pressure, or hot water showing a temperature not less than 180° F.

SEC. 19. No person shall sell to any ultimate consumer or with the intent so to do have in his possession, care, custody, or control any pasteurized milk, skimmed milk, cream, buttermilk, or milk prepared by a fermentation or other process unless such milk, skimmed milk, cream, or buttermilk, or milk prepared by fermentation or other process is contained in and is sold in a tightly closed container in which it was pasteurized or placed immediately after pasteurization and then closed and kept continuously closed until after sale: *Provided*, That cream or milk served as a flavoring for food or drink may be served in suitable containers when taken from packages as provided in this section.

SEC. 20. Only producers who produce and handle milk under rules and regulations of the board of health, which will insure that it comes from cows free from disease, as determined by tuberculin tests and physical examination by a qualified veterinarian, and is produced and handled by employees free from disease, as determined by medical inspection of a qualified physician, and under sanitary conditions such that it will reach the ultimate consumer fresh, unadulterated and with not more than 50,000 living bacteria per cubic centimeter, may be sold without being pasteurized, if dispensed in containers in accordance with section 18 and marked "Raw" in letters easily read on a tag, label, or cap. The board of health shall adopt rules and regulations for the production and handling of such milk and may provide for the execution and enforcement of such rules and regulations by such agencies as they may appoint. The term "producer," as used in this act, shall mean the owner of the cow or herd of cows from which milk is taken to be placed upon the market or from which milk is taken to be converted into milk products to be marketed, and shall

not mean a person who buys the milk or products which he places upon the market, or who buys any part of the milk or milk products which he places upon the market.

SEC. 21. That any person, firm, or corporation violating any of the provisions of this act shall, upon conviction, for the first offense be punished by a fine of not less than \$10 and not more than \$25, for the second offense a fine of not less than \$25 nor more than \$50, and for the third and subsequent offenses by a fine of \$100 and imprisonment in the county jail for not less than 30 nor more than 90 days.

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